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TRANSCRIPT OF RECORD.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1886.

No. 150.

THE THATCHER HEATING COMPANY, DAVID STUART, RICHARD PETERSON, BENTLEY C. BIBB AND SAMUEL B. SEXTON, APPELLANTS,

vs.

JOHN H. BURTIS AND JOHN M. GRAFF.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK.

FILED OCTOBER 12, 1883.

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1 The President of the United States of America to John H. Burtis and John M. Graff, doing business together in the city of New York under the firm name of Burtis & Graff, Greeting:

You are hereby commanded that you and each of you personally appear before the judges of the circuit court of the United States of America for the southern district of New York, in the second circuit *court*, in equity, on the first Monday of January, A. D. 1876, wherever the said court shall then be, to answer a bill of complaint exhibited against you in the said court by The Thatcher Heating Company, David Stewart, Richard Peterson, Bentley C. Bibb, and Samuel B. Sexton, and do further and receive what the said court shall have considered in that behalf. And this you are not to omit under the penalty on you and each of you of two hundred and fifty dollars.

Witness Honorable Morrison R. Waite, Chief Justice of the Supreme Court of the United States, at the city of New York, on the 13th day of December, in the year one thousand eight hundred and seventy-five, and of the Independence of the United States of America the [one] hundredth.

[L. S.] KENNETH G. WHITE, *Clerk.*

F. C. BOWMAN,
Comp'ts' Sol'r.

The defendants are required to enter appearance in the above cause in the clerk's office of this court on or before the first Monday of January, 1876, or the bill will be taken *pro confesso* against them.

K. G. W., *Clerk.*

2 [Endorsed:] U. S. circuit court. The Thatcher Heating Co. & others *vs.* John H. Burtis & John M. Graff. Subpœna. F. C. Bowman, compl'ts' solicitor. Filed June 4, 1876.

I hereby certify that on the 14th day of December, 1875, at the city of New York, in my district, I personally served the within writ upon the within-named John J. Burtis by exhibiting to him the within original and at the same time leaving with him a copy thereof. The within-named Graff not found.

Dated Jan'y 4, 1876.

OLIVER FISKE,
U. S. Marshal, S. D. N. Y.

3 United States Circuit Court, Southern District of New York.
In Equity.

To the honorable the judges of the circuit court of the United States for the second circuit within and for the southern district of New York, sitting in equity:

The Thatcher Heating Company, a corporation duly incorporated under the laws of the State of New York, located and doing business in the city of New York, in the State of New York, David Stuart

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Witness Honorable Morrison R. Waite, Chief Justice of the Supreme Court of the United States, at the city of New York, on the 13th day of December, in the year one thousand eight hundred and seventy-five, and of the Independence of the United States of America the [one] hundredth.

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Dated Jan'y 4, 1876.

OLIVER FISKE,
U. S. Marshal, S. D. N. Y.

3 United States Circuit Court, Southern District of New York.
In Equity.

To the honorable the judges of the circuit court of the United States for the second circuit within and for the southern district of New York, sitting in equity:

The Thatcher Heating Company, a corporation duly incorporated under the laws of the State of New York, located and doing business in the city of New York, in the State of New York, David Stuart

and Richard Peterson, both of the city of Philadelphia, Pennsylvania, and citizens of the State of Pennsylvania, and Bentley C. Bibb and Samuel B. Sexton, of Baltimore, Maryland, and citizens of the State of Maryland, bring this their bill against John H. Burtis and John M. Graff, doing business together in the city of New York under the firm name of Burtis & Graff, and both citizens of the State of New York.

And thereupon your orators complain and say that before the 14th day of June, 1870, John M. Thatcher, of Bergen, in the State of New Jersey, being the original and first inventor of a new and useful improvement in fire-place heaters not known or used before and not at that time in public use or on sale with his consent or allowance for more than two years, made application to the proper department of the Government of the United States for the grant of their letters patent therefor in accordance with the then existing laws of Congress.

4 And your orators further represent and show that thereupon such proceedings were had that letters patent of the United States, dated the 14th day of June, one thousand eight hundred and seventy, numbered 104,376, were issued in due form of law and delivered to the said John M. Thatcher for the said invention, whereby there was granted to the said John M. Thatcher, his executors, administrators, or assigns, for the term of seventeen years from the date thereof, the full and exclusive right and liberty of making, using, and vending to others to be used, the said invention throughout the United States and the Territories thereof, as in and by a certified copy of the said letters patent now in court produced and shown to your honors will more fully appear.

And your orators further show to your honors that afterwards and on the seventeenth day of June, one thousand eight hundred and seventy, by deed of that date duly executed and recorded in the United States Patent Office, the said John M. Thatcher assigned all right, title, and interest in said letters patent and the invention and improvements secured thereby to the Thatcher Heating Company, a corporation established by law of the State of New York, as by the said deed of assignment, or certified copy thereof with the endorsement of the recording thereon, now produced and shown to your honors will more fully appear; and that the invention and improvements secured thereby became vested in your orators, The Thatcher Heating Company.

And your orators further show to your honors that afterwards and on the eighteenth day of June, one thousand eight hundred and seventy, by deed of that date duly executed and recorded in the United States Patent Office, the said Thatcher Heating Company assigned the full and undivided one-quarter part of all their said right, title, and interest in said letters patent and the invention and improvements secured thereby to Bentley C. Bibb, one of your orators, as by the said deed of assignment, or certified copy

5 thereof with the endorsement of the recording thereon, now produced and shown to your honors will more fully appear.

And your orators further show to your honors that on the said eighteenth day of June, one thousand eight hundred and seventy, by deed of that date duly executed and recorded in the United States Patent Office, the said Thatcher Heating Company assigned the full and equal undivided one-quarter part of all their said right or title and interest in said letters patent and the invention and improvements secured thereby to Samuel B. Sexton, of the city of Baltimore, State of Maryland, one of your orators, as by the said deed of assignment, or a certified copy thereof with the endorsement of the recording thereon, now produced and shown to your honors will more fully appear.

And your orators further show unto your honors that on the said eighteenth day of June, one thousand eight hundred and seventy, by deed of that date duly executed and recorded in the United States Patent Office, the said Thatcher Heating Company assigned the full and equal undivided one-quarter part of all their right, title, and interest in said letters patent and the invention and improvements secured thereby to your orators, David Stuart and Richard Peterson, doing business in the city of Philadelphia, State of Pennsylvania, under the firm name of Stuart, Peterson & Company, as by the said deed of assignment, or certified copy thereof with the endorsement of the recording thereon, now produced and shown to your honors will more fully appear.

By reason of which several assignments the whole right, title, and interest in said letters patent and the invention and improvements secured thereby became and still *is* invested as follows: One-fourth thereof in the said Thatcher Heating Company; one-fourth thereof in Bentley C. Bibb; one-fourth thereof in Samuel B. Sexton, and the remaining fourth in the said Stuart Peterson & Co., composed as aforesaid.

And your orators further show unto your honors that your orators and their assignors have always since the grant
6 of the said letters patent, and during the time they each owned the same respectively, or any interest in the same, and in the full and exclusive right and liberty so granted, as aforesaid, made, used, and vended to others to be used, the fire-place heaters so patented, and have had maintained, until the infringement hereof complained of, exclusive possession of said invention under and by virtue of said letters patent, and have never acquiesced in any invasion or infringements of their rights.

And your orators further show that the said fire-place heaters made by your orators under the said patent are of great utility and value, and that great numbers of the same have been manufactured, erected, and sold by your orators in various parts of the United States.

And your orators further show unto your honors that the said defendants, John H. Burtis and John M. Graff, having full knowledge of the premises and in violation of your orators' exclusive right and privileges as aforesaid, and utterly disregarding the same, have since the assignment of the said letters patent to your orators as aforesaid, without the license of your orators, at the city of New

York and elsewhere, erected, used, and sold, and still continue to erect, use, and sell, many fire-place heaters embracing the invention described in said letters patent and so secured to your orators; how many your orators do not know, but pray the defendants may discover and set forth in their answer to this bill.

And your orators further show unto your honors that they will be subject to great and irreparable injury unless they shall obtain from your honors the relief hereby sought.

To the end, therefore, that the said defendants may, if they can, show why your orators should not have the relief hereby prayed, and may upon their several and respective corporal oaths and according to the best and utmost of their knowledge, remembrance, and belief, full, true, direct, and perfect answer make to all and singular the matters hereinbefore stated and charged as fully and particularly as if the same were hereinafter repeated and they thereunto distinctly interrogated, and more especially that they may answer and set forth—

7 I. Whether letters patent were not issued to John M. Thatcher, as herein set forth, and whether the same have not become vested in your orators, as herein set forth.

II. Whether the defendants have not, since the issue of said letters patent, as aforesaid, and since the same became vested in your orators, as aforesaid, in the city of New York, or elsewhere in the United States, made and constructed, used or sold, fire-place heaters involving the invention described and claimed in said letters patent.

III. What amount of profit has been made or derived by the defendants from the use of the invention described and claimed in said letters patent since said 18th day of June, 1870.

And your orators further pray that the said defendants may be forthwith restrained, by a writ of injunction out of and under the seal of this honorable court, from using, making, or vending any article involving, embracing, or manufactured in pursuance of the invention secured to your orators by virtue of the said letters patent numbered 104,376, and from all violations or infringements of the exclusive right of your orators under or by virtue of said letters patent, and that on the final hearing of this cause the said injunction may be made perpetual; and, further, that the said defendants may be decreed to account to your orators for all profits realized by them from the sale of articles made pursuant to the said invention, as secured to your orators by said letters patent bearing date the 14th day of June, 1870, in violation of the exclusive rights of your orators, and also to pay to your orators, in addition to said profits, the damages which have been sustained by your orators by reason of said infringements; and that your orators may have such other and further relief in the premises as the nature of the case may require and as may be according to equity and good conscience.

8 And may it please your honors to grant to your orators a writ of subpœna, to be directed to the said defendants, John H. Burtis and John M. Graff, commanding them, at a certain day and under a certain penalty, to be and appear before this honorable court, and then and there full, true, direct, and perfect answer make

to all and singular the premises, whether specially interrogated thereto or not, and further to stand to, abide by, and perform such further orders, directions, and decrees therein as to your honors shall seem meet and proper.

And your orators will ever pray, &c.

THE THATCHER HEATING COMPANY,
By JOHN M. THATCHER, *Vice-President.*

FRANCIS C. BOWMAN,
Complainant's Solicitor.

B. F. LEE,
Of Counsel.

UNITED STATES OF AMERICA, }
Southern District of New York, } *ss:*

On this 9th day of Dec., 1875, before me, a commissioner of the circuit court, personally appeared John M. Thatcher, who, being duly sworn, deposes and says that he is the vice-president of The Thatcher Heating Company, one of the complainants named in the foregoing bill; that he has read the said bill and knows the contents thereof, and that the same is true of his own knowledge except as to the matters therein stated to be on information and belief, and as to those matters he believes it to be true.

JOHN M. THATCHER.

Subscribed and sworn to before me this 9th December, 1875.

R. E. STILLWELL,
U. S. Comm.

Endorsed: U. S. circuit court, southern district of New York. The Thatcher Heating Co. *et al. vs.* John H. Burtis & *al.* Bill of complaint. F. C. Bowman, solicitor for compl't. Filed Dec. 13, 1875.

9 In the United States Circuit Court for the Southern District of New York. In Equity.

THE THATCHER HEATING COMPANY, Compl't,
vs.
JOHN H. BURTIS & JOHN M. GRAFF, Def'ts.

To the clerk of the U. S. cir. court aforesaid:

SIR: I hereby give notice of my retainer, and enter appearance for the above-named defendants in the aforesaid action.

Respectfully, CHAS. J. HUNT,
32 *No. Pearl St., Albany, N. Y., D'f'ts' Solicitor.*

THOS. S. SPRAGUE,
Albany, N. Y., Of Counsel.

Endorsed: U. S. circuit court, so. dist. of New York. The
10 Thatcher Heating Company, compl't, *v.* John H. Burtis & John M. Graff. In Equity. Precipe for appearance C. J. Hunt, def'ts' solicitor; Thos. S. Sprague, of counsel. Filed Dec. 31st. 1875.

11 U. S. Circuit Court, South. Dist. of New York. In Equity.

THE THATCHER HEATING COMPANY
vs.
JOHN H. BURTIS & JOHN M. GRAFF.

Consented that A. J. Todd be substituted in my place and stead s solicitor for the above-named defendants.
Dated Albany, N. Y., Feb'y 10, 1876.

C. J. HUNT,
Sol. for Compl't.

(Endorsed:) U. S. circuit court, south. dist. of N. Y. In equity. The Thatcher Heating Company *vs.* John H. Burtis and John M. Graff. Consent substituting A. J. Todd as sol'r for defendants. Filed Feb'y 16, 1876.

12 United States Circuit Court, Southern District of New York. In Equity.

THE THATCHER HEATING [COMPANY], DAVID STUART, RICHARD PETERSON, BENTLEY C. BIBB, and SAMUEL B. SEXTON
vs.
JOHN H. BURTIS and JOHN M. GRAFF.

The joint and several answers of John H. Burtis and John M. Graff, the above-named defendants, to the bill of complaint of The Thatcher Heating Company, David Stuart, Richard Peterson, Bentley C. Bibb, and Samuel B. Sexton, the above-named complainants.

These defendants, now and at all times hereafter, saving and reserving unto themselves all and all manner of benefit and advantage of exception which may be had or taken to the manifold errors and insufficiencies in the bill of complaint contained, for answers thereto or unto so much thereof as they are advised is material or necessary to make answer unto, answering, say that they admit that they are copartners trading under the firm name of Burtis and Graff; that they are not informed, save by said bill of complaint, whether the Thatcher Heating Company is a corporation duly incorporated under the laws of the State of New York or located and doing business in the city of New York, and can neither admit nor deny the same, but leave the complainants to make such proof thereof as they are advised it is necessary and material to establish such alleged fact.

13 And these defendants, further answering, admit that John M. Thatcher did, on the 14th day of June, 1870, obtain letters patent of the United States for an alleged new and useful improvement in fire-place heaters, but deny that said Thatcher was the original or first inventor of said alleged improvement, or that the same was not known or used before the alleged invention thereof by the said Thatcher.

And these defendants, further answering, say that they are not informed, save by said bill of complaint, and do not know, whether

the said John M. Thatcher assigned all his right, title, and interest in said letters patent to the Thatcher Heating Company, as in said bill of complaint mentioned, and can neither admit nor deny the same, and therefore leave the complainants to make such proof thereof as they may be advised is material or necessary.

And these defendants, further answering, say that they are not informed, save by said bill of complaint, and do not know, whether the Thatcher Heating Company assigned the full and undivided one-quarter part of all their right, title, and interest in said letters patent to one Bentley C. Bibb, as in said bill of complaint mentioned, and can neither admit nor deny the same, and therefore leave the complainants to make such proof thereof as they may be advised is material or necessary.

And these defendants, further answering, say that they are not informed, save by said bill of complaint, and do not know, whether the Thatcher Heating Company assigned the full and undivided one-quarter part of all their right, title, and interest in said letters patent to one Samuel B. Sexton, as in said bill of complaint mentioned, and can neither admit nor deny the same, and therefore leave the complainants to make such proof thereof as they may be advised is material and necessary.

And these defendants, further answering, say that they are not informed, save by said bill of complaint, and do not know, whether the Thatcher Heating Company assigned the undivided one-
14 quarter part of all their right, title, and interest in said letters patent to David Stuart and Richard Peterson, in said bill of complaint mentioned, and can neither admit nor deny the same, and therefore leave the complainants to make such proof thereof as they may be advised is necessary or material.

And these defendants, further answering, deny that the complainants have had the exclusive possession of said alleged invention, as set forth in the bill of complaint, or any possession thereof, except what has been shared and participated in by the stove trade generally, and such possession by the trade generally has been without any interference therein by the complainants, or any of them, prior to the commencement of this suit.

And these defendants, further answering, say that things patented in and by said letters patent, and every substantial and material part thereof claimed as new, were anterior to the supposed or any invention thereof by the said Thatcher described in the following letters patent:

Letters patent of the United States granted to David Stuart and Lewis Bridge May 5th, 1868, numbered 77549.

Letters patent of the United States granted R. D. Granger September 24th, 1861, numbered 2341 (whole number 33345).

Letters patent of the United States granted Abraham H. Saunders July 14th, 1868, numbered 80016.

Letters patent of the United States granted to J. C. Henderson May 29th, 1860, numbered 28482.

Letters patent of the United States granted G. G. Kingsbury April 12th, 1859, numbered 23587.

Letters patent of the United States granted to James Gray October 18th, 1864, numbered 44719.

Letters patent of the United States granted to W. H. Goewey May 26th, 1863, numbered 38673.

Letters patent of the United States granted to H. F. T. Hale September 13th, 1864, numbered 44183.

Letters patent of the United States granted W. B. Treadwell May 23d, 1865, numbered 47881.

15 Letters patent of the United States granted to W. C. Durant July 23d, 1867, numbered 66957.

Letters patent of the United States granted to B. F. Roney September 24th, 1861, numbered 33367.

Letters patent of the United States granted to Jordan A. Mott December 3d, 1833.

Letters patent of the United States granted to Jordan A. Mott May 30th, 1832.

Letters patent of the United States granted to Eliphalet Nott June 29th, 1833.

Letters patent of the United States granted to Zebulon Hunt June 14th, 1864, numbered 43155.

Letters patent of the United States granted to George J. Hunt June 9th, 1863, numbered 38828.

Letters patent of the United States granted to William Hailes and J. G. Treadwell May 7th, 1861, numbered 1253 (whole number 32257).

Letters patent of the United States granted to M. A. Mead and William Hailes, as assignees of William Hailes and J. G. Treadwell, August 11th, 1863, numbered 39535.

Letters patent granted to James Easterly February 13th, 1855, and numbered 12382.

Letters patent granted to S. B. Sexton April 4th, 1865, and numbered 47136.

Letters [patent] of the United States granted to S. B. Sexton March 17th, 1868, and numbered 75585.

Letters patent of the United States granted to Wm. J. Cantela June 28th, 1859, and numbered 24539.

Letters patent granted in Great Britain in the year 1830 to Joel B. Notts, and numbered 6026.

Letters patent granted in Great Britain in the year 1842 to Thomas Walker, and numbered 6026.

Letters patent granted in Great Britain in the year 1839 to Harper and Walker, and numbered 8065.

Letters patent granted in Great Britain in the year 1850 to —— Grant, and numbered 13298.

Letters patent granted in Great Britain in the year 1846 to —— Cantelos, and numbered —.

16 Letters patent granted in France September 23d, 1840, to —— ——, and numbered 7574.

And in the printed book commonly known as Piclet, de la Chaleurs, second edition, and entitled "Traite de la Chaleur, considerce dans ses applications," par E. Piclet, deuxieme edition Planches—

Paris, Librarie de A. Hackette, Rue Pierre Sons, Zin 12, 1843, in figure No. 1 of plate 73, and the text referring thereto on pages 193, 194, 195, and 196, volume 2, paragraph 1481.

And these defendants, further answering, say that they are informed and believe that the things patented in and by said letters patent in the bill of complaint mentioned, and every substantial and material part thereof claimed as new, were anterior to the supposed or any invention thereof by the said Thatcher known to and publicly used by divers persons in this country, and among such persons who had such prior knowledge and who used the same as aforesaid are as follows:

David Stuart, at Philadelphia, Pennsylvania, and elsewhere in the United States, now residing at said Philadelphia.

Lewis Bridge, at Philadelphia, Pennsylvania, and elsewhere in the United States, now residing at said Philadelphia.

R. D. Granger, at Albany, New York, and elsewhere in the United States, now residing at said Albany.

Abraham K. Saunders, at Brooklyn, New York, and elsewhere in the United States, now residing at said Brooklyn.

J. C. Henderson, at Albany, New York, and elsewhere in the United States, and now residing at said Brooklyn.

G. G. Kingsbury, at Rochester, New York, and elsewhere in the United States, now residing at said Rochester.

W. H. Goewey, at Albany, State of New York, and elsewhere in the United States, now residing at said Albany.

H. F. T. Hale, at Milwaukee, Wisconsin, and elsewhere in the United States, now residing at said Milwaukee.

17 W. B. Treadwell, at Albany, New York, and elsewhere in the United States, now residing at Albany.

W. C. Durant, at West Troy, New York, and elsewhere in the United States, now residing at said West Troy.

B. F. Roney, at Bristol, Pennsylvania, and elsewhere in the United States, now residing at said Bristol.

Jordan L. Mott, at the city of New York, State of New York, and elsewhere in the United States, now residing in said city of New York.

Eliphalet Nott, at New Haven, Connecticut, and elsewhere in the United States (now deceased).

Zebulon Hunt, at Hudson, New York, and elsewhere in the United States, now residing at said Hudson.

George J. Hunt, at Quincy, Illinois, and elsewhere in the United States, now residing at said Quincy.

William Hailes, at Albany, New York, and elsewhere in the United States, now residing at said Albany.

J. G. Treadwell, at Albany, New York, and elsewhere in the United States, now residing at said Albany.

M. L. Mead, at Albany, New York, and elsewhere in the United States, now residing at said Albany.

James Easterly, at Albany, New York, and elsewhere in the United States, now residing at said Albany.

S. B. Sexton, at Baltimore, Maryland, and elsewhere in the United States, now residing at said Baltimore.

David S. Quimby, at Brooklyn, New York, and elsewhere in the United States, now residing at said Brooklyn.

William H. Stimpson, at Baltimore, Maryland, and elsewhere in the United States, now residing at said Baltimore.

J. H. B. Latrobe, at Baltimore, Maryland, and elsewhere in the United States, now residing at said Baltimore.

James Spear, at Philadelphia, Pennsylvania, and elsewhere in the United States, now residing at said Philadelphia.

James Atwater, at New Haven, Connecticut, and elsewhere in the United States, now residing at said New Haven.

18 Daniel Desmond, at ——, and elsewhere in the United State, now residing at ——.

James Williamson, at —— and elsewhere in the United States, now ——.

Henry L. Robbins, at Baltimore, Maryland, and elsewhere in the United States, now residing at said Baltimore.

Henry L. Budd, at the city of New York and elsewhere in the United States, now residing at the said city of New York.

Davis L. Quimby, at Brooklyn, New York, and elsewhere in the United States, now residing at said Brooklyn.

Bentley C. Bibb and Henry Angel, at Baltimore, Maryland, and elsewhere in the United States, now residing at said Baltimore.

Charles J. Shepard, at the city of New York and elsewhere in the United States, now residing in Brooklyn, New York.

Watson Sanford, at the city of New York and elsewhere in the United States, now residing in Brooklyn, New York.

By the firm of Jackson & Son, of New York city, at said city of New York and elsewhere in the United States.

Adam Hampton's Sons, at New York city and elsewhere in the United States, now doing business at No. — Cliff street, in the said city of New York.

John H. Burtis, of the city of New York and elsewhere in the United States, now residing in Brooklyn, State of New York.

D. G. Littlefield, at Albany, in the State of New York, and elsewhere in the United States, now residing at said Albany.

William A. Green, at Medford, in the State of Massachusetts, and elsewhere in the United States, now residing at said Medford.

19 William B. Boynton, at New York city and elsewhere in the United States, now residing at Brooklyn, New York.

And these defendants, further answering, allege that the said Thatcher is not the original and first inventor of the subject-matter claimed in the letters patent granted to him on the 14th day of June, 1870, and numbered 104,376, but that, prior to any alleged invention thereof, or of any substantial or material part thereof, by the said Thatcher, Jordan L. Mott, of the city of New York, originated and reduced the same, and every substantial and material part thereof, to practice in the form of an operative device, and that the said Thatcher subsequently applied for letters patent and surreptitiously and unjustly obtained letters patent therefor.

And these defendants, further answering, say that the said letters patent described old and well-known measures as applicable to alleged but not in fact new uses, and that the application to such alleged new uses is not invention and is not patentable, and these defendants pray the judgment of this honorable court thereon.

And these defendants pray the same benefit of the facts and matters herein above stated as if, for the reason thereof, said bill had been demurred to, where a demurrer would have been proper, and the same benefit thereof as if they had been specially pleaded to said bill.

And the defendants submit to this honorable court that said complainants have no right to any further answer to said bill, or any part thereof, than is above given, and no right to any injunction, account, or other relief prayed for in said bill.

And the defendants pray to be hence dismissed, with their reasonable costs and charges in their behalf most wrongfully sustained.

JOHN H. BURTIS.
BURTIS AND GRAFF.

A. J. TODD,
Solicitor and of Counsel for Defendants.

20 UNITED STATES OF AMERICA,
Southern District of New York:

On this 4th day of April, 1876, before me personally appeared John H. Burtis, one of the above-named defendants, who, being by me duly sworn, deposes and says that he is one of the firm of Burtis & Graff, the defendants; that he has read the foregoing answer by him subscribed, and knows the contents thereof, and that the same is true of his own knowledge, except as to the matters therein stated to be on information and belief, and as to those matters he believes it to be true.

JOHN A. SHIELDS,
U. S. Commissioner, S. D. of N. Y.

Endorsed: U. S. circuit court, southern district of New York. In equity. The Thatcher Heating Co. *et al. vs.* John H. Burtis *et al.* Answer. A. J. Todd, sol. for def'ts, 37 Park Row. Filed Ap'l 4, 1876.

21 U. S. Circuit Court, South. Dist. of New York. In Equity.

THATCHER HEATING CO. *et al. vs.* JOHN H. BURTIS *et al.*

It is hereby stipulated and agreed that the answer of the defendants herein may be amended by inserting therein the following letters patent, as being alleged anticipations of the alleged invention set forth in the letters patent in the bill of complaint mentioned.

Reissued letters patent of the United States granted to Eliphalet Nott September 17th, 1832, for improvement in stoves, &c.

Reissued letters patent of the United States granted to Eliphalet Nott October 17th, 1835, for improvement in the adaptation
22 of the anthracite coal stove to open fire-places.

Letters patent granted in Great Britain to Richard Coad and John Peers Coad in the year 1852, No. 738, for fire-places and means of applying heat.

Also that said amendments to said answer be made *nunc pro tunc* as of the date when said answer was originally filed, and that replication and all subsequent proceedings do stand as if said answer had been originally filed as amended.

Dated March 31st, 1880.

W. H. L. LEE,
Of Counsel for Compl'ts.
A. J. TODD,
Counsel for Def'ts.

23 U. S. Circuit Court, South. Dist. of New York. In Equity.

THATCHER HEATING CO. *et als. vs.* JOHN H. BURTIS *et al.*

It is hereby stipulated and agreed that the answer of the defendants herein may be amended by inserting therein the names of the following persons as prior users of the invention set forth in the letters patent of the complainant upon which this suit is founded, viz:

Henry O. Andrews, at the city of New York and elsewhere in the United States, now residing at Hempstead, Long Island.

Robert M. Stratton and Captain Seymour, of the firm of Stratton & Seymour, now deceased, all at the city of New York and elsewhere in the United States.

Robert Z. Liddle, at the city of New York and elsewhere in
24 the United States, now residing at Albany, New York.

Michael P. Low, at the city of New York and elsewhere in the United States, now residing in said city of New York.

Charles C. C. Rice, at the city of New York and elsewhere in the United States, now residing at Brooklyn, N. Y.

Also by inserting the following as anticipations of the inventors described and claimed in said letters patent in the bill of complaint set forth, viz:

Letters patent of the United States granted Andrew Brown February 12, 1867, for magazine stove, and numbered 61922.

Letters patent of the United States granted Van Harmer & McGawey for magazine stove May 1, 1866, and numbered 54447.

Letters patent granted in England in the year 1857 to Robert Russell, numbered 113.

25 It is also stipulated and agreed that upon the filing of this stipulation said answer shall be considered and stand as so amended, and that the replication to the original answer herein shall stand as the replication to said amended answer.

Dated April 21st, 1882.

B. F. LEE,
For Comp'ts.
A. J. TODD,
Counsel & Sol'r for Def'ts.

Endorsed: U. S. circuit court, south. dist. of New York. In equity. Thatcher Heating Co. *et al. vs.* John H. Burtis *et al.* Amendment to answer. A. J. Todd, sol'r for def'ts, 261 B'way. Filed in court May 17, 1882. T.

26 United States Circuit Court for the Southern District of New York. In Equity.

THE THATCHER HEATING CO., DAVID STUART, RICHARD PETERSON, BENTLEY C. BIBB, and SAMUEL B. SEXTON

vs.

JOHN H. BURTIS and JOHN M. GRAFF.

The replication of The Thatcher Heating Company, David Stuart, Richard Peterson, Bentley C. Bibb, and Samuel B. Sexton to the answer of John H. Burtis and John M. Graff, defendants.

27 These repliants, saving and reserving unto themselves now and at all times hereafter all and all manner of benefit and advantage of exception which may be had or taken to the manifold insufficiencies of the said answer, for replication thereunto say that they will aver, maintain, and prove their said bill of complaint to be true, certain, and sufficient in law to be answered unto, and that the said answer of the said defendants is uncertain, untrue, and insufficient to be replied unto by these repliants, without this, that any other matter or thing whatsoever in the said answer contained material or effectual in the law to be replied unto and not herein and hereby well and sufficiently replied unto, confessed or avoided, traversed or denied, is true; all which matters and things these repliants are and will be ready to aver, maintain, and prove as this honorable court shall direct, and humbly pray as in and by their said bill they have already prayed.

Dated May 1st, 1876.

F. C. BOWMAN,
Sol'r for Complainants.
B. F. LEE, ESQ.,
Of Counsel.

(Endorsed:) U. S. circuit court, southern dist. of New York. The Thatcher Heating Company *vs.* John H. Burtis and John M. Graff. Replication. F. C. Bowman, sol. for comp'nts. B. F. Lee, of counsel, consented that the enclosed replication be filed as within time as of the 3d day of June, 1876. A. J. Todd, sol. for def'ts. Filed June 3, 1876.

Circuit Court of the United States for the Southern District of New York.

THE THATCHER HEATING COMPANY *et als.*

vs.

JOHN H. BURTIS and JOHN M. GRAFF.

Testimony taken on the part of the complainants before R.
28 E. Stillwell, examiner, &c., under the 67th rule of the Supreme Court of the United States (as amended), to be used on the final hearing of this cause before the circuit court of the United States for the southern district of New York.

THURSDAY, *December 14th*, 1876.

Present: Francis C. Bowman, Esq., counsel for complainants; A. J. Todd, Esq., counsel for defendants.

Adjourned to the 18th inst., at 3 p. m.

MONDAY, *December 18th*, 1876.

Present: Francis C. Bowman, Esq., counsel for complainants.

Complainant offers in evidence the following documents, to wit:

A certified copy of the certificate of incorporation of the Thatcher Heating Company, marked for identification Complainants' Ex. A., R. E. S., examiner, &c.

Also certified copy of letters patent of the United States dated June 14th, 1870, and numbered 104,376, marked Complainants' Exhibit "B," R. E. S., examiner, &c.

Also an assignment from John M. Thatcher to the Thatcher Heating Company, dated June 17th, 1870, assigning all his right, title, and interest in letters patent 104,376 to that company, marked Complainants' Exhibit "C," R. E. S., examiner, &c.

Also a certified copy of assignment from the Thatcher Heating Company to Bentley C. Bibb, dated June 18th, 1870, marked Complainants' Exhibit "D," R. E. S., examiner, &c.

29 Also a certified copy of an assignment from the Thatcher Heating Company to Samuel D. Sexton, dated June 18th, 1870, marked Complainants' Exhibit "E," R. E. S., examiner, &c.

Also a certified copy of an assignment from the Thatcher Heating Company to David Stuart and Richard Peterson, dated June 18th, 1870, marked Complainants' Exhibit "F," R. E. S., examiner, &c.

Complainant thereupon calls JOHN M. THATCHER, who, being duly affirmed according to law, deposes and says:

Q. 1. What is your name, age, residence, and occupation?

A. My name is John M. Thatcher; I reside at Jersey City, New Jersey; age, fifty-nine years, and am a manufacturer of stoves, fireplace stoves or heaters, ranges, and furnaces.

Q. 2. How long have you been in that business, and state whether you have made any inventions or taken out any patents in relation to the same.

A. I have been in that business thirty years, and have been nearly all that time experimenting, inventing, and manufacturing stoves and heating apparatus. I have taken out patents on cook-stoves, furnaces, fire-place stoves and heaters, and among others the patent on which this suit is brought, No. 104,376.

Q. 3. Do you know of any top-feeding base-burning fire-place heaters manufactured and kept on sale by the defendants? And, if yea, give the trade names of the same.

A. I do; the first is called "The Morning Glory," another called "The Burtis," of two patterns; another called "The Mayflower."

Q. 4. Have you recently read the specification of your patent No. 104,376, and is the same fresh in your mind and fully understood by you? And, if yea, please state whether the heaters mentioned in your last answer resemble or differ from what is described in said patent and claimed in the first two clauses of the claim thereof.

A. I have recently read my patent and the same is fresh in my mind and fully understood by me. Each of the heaters named does not differ from what is described and claimed in the first and second claims of said patent. In those respects each of said heaters is precisely the same as what is described and claimed in the first and second claims of the patent.

Q. 5. State whether or not you know the defendants have sold the heaters named in your answer to the third question between the 14th of June, 1870, and the 9th day of December, 1876.

A. I know that they have so sold "The Morning Glory" and the two patterns of the "Burtis." I did not know of their selling the "Mayflower" until 1876. I have seen them delivering these goods from their place of business in Water street, and Burtis himself has admitted to me that they had made such sales.

JOHN M. THATCHER.

Subscribed and sworn to before me this 18th day of December, 1876.

R. E. STILLWELL,
Examiner, &c.

Adjourned to the 22d, at 3 p. m.

I, R. E. Stillwell, an examiner duly appointed, &c., do certify that John M. Thatcher, the witness above named, appeared before me on the 18th day of December, 1876, and, after being duly sworn by me in the above matter, he gave his testimony on the part of the complainant, which was reduced to writing by me, and he subscribed the same in my presence.

I further certify that Francis C. Bowman, Esq., appeared as counsel for the complainant, and A. J. Todd, Esq., as counsel for defendant, on the 14th day of December, 1876, and that the hearing was adjourned to the 18th inst., at which time said testimony was taken.

R. E. STILLWELL,
Examiner, &c.

31 COMPLAINANT'S EXHIBIT A. R. E. S., Ex'r. Dec. 18th, 1876.

STATE OF NEW YORK, } ss:
City and County of New York, }

We, John M. Thatcher, William Cotheal, Egbert Ward, Morris S. Thompson, and John F. Miller, do hereby certify that we desire to form a company pursuant to the provisions of an act entitled "An act to authorize the formation of corporations for manufacturing, mining, mechanical, or chemical purposes," passed February 17th, 1848, and of the several acts extending and amending such act.

That the corporate name of said company is to be "Thatcher Heating Company," and the objects for which the company is to be formed are to manufacture, sell, and deal in apparatus for heating ventilating, and all articles connected therewith; that the amount of the capital stock of the said company is to be fifty thousand dollars; that the term of the existence of the said company is to be fifty years; that the number of shares of which the said stock is to consist is to be fifty thousand, and the number of the trustees who shall manage the concerns of said company for the first year is five, and the names of such trustees are John M. Thatcher, Willam Cotheal, Egbert Ward, Morris S. Thompson, and John F. Miller, and the name of the place in which the operations of the said company are to be carried on is the city and county of New York.

WILLIAM COTHEAL.
EGBERT WARD.
M. S. THOMPSON.
JOHN F. MILLER.
JOHN M. THATCHER.

In presence of—
CHAS. M. HALL.
[U. S. 5-cent stamp, canceled.]

32 STATE OF NEW YORK, } ss:
City and County of New York, }

On this thirtieth day of April, A. D. 1868, before me personally appeared John M. Thatcher, William Cotheal, Egbert Ward, Morris S. Thompson, and John F. Miller, to me known to be the individuals described in and who executed the foregoing certificate, and they severally before me signed the said certificate and acknowledged that they signed and executed the same for the purpose therein mentioned.

CHAS. M. HALL,
Notary Public.

STATE OF NEW YORK, } ss:
City and County of New York, }

I, Henry A. Gumbleton, clerk of the said city and county and clerk of the supreme court of said State for said county, do certify that I have compared the preceding with the original certificate of incorporation on file in my office, and that the same is a correct transcript therefrom and of the whole of such original.

In witness whereof I have hereunto subscribed my name and affixed my official seal this 13th day of April, 1877.

[SEAL.] HENRY A. GUMBLETON, *Clerk.*

Endorsed: Filed 30 April, 1868.

33 COMPLAINANTS' EXHIBIT B. R. E. S., Ex'r. Dec. 18, 1876.

THE U. S. PATENT OFFICE.

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the records of this office of the letters patent granted John M. Thatcher, dated June 14th, 1870, No. 104,376, for improvement in fire-place heaters.

In testimony whereof I, J. M. Thacher, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this seventh day of June, in the year of our Lord one thousand eight hundred and seventy-two, and of the Independence of the United States the ninety-sixth.

[SEAL.] J. M. THACHER,
Acting Commissioner.

No. 104,376.

THE UNITED STATES OF AMERICA.

To all to whom these letters patents shall come:

Whereas John M. Thatcher, of Bergen, New Jersey, has alleged that he has invented a new and useful improvement in fire-place heaters, and has made oath that he is a citizen of the United States; that he verily believes he is the original and first inventor or discoverer of the said improvement, and that the same hath not to his knowledge and belief been previously known or used; has
33½ paid into the Treasury of the United States the sum of thirty-five dollars, and presented a petition to the Commissioner of Patents praying that a patent may be issued therefor:

These are, therefore, to grant to the said John M. Thatcher, his executors, administrators, or assigns, for the term of seventeen years from the fourteenth day of June, one thousand eight hundred and seventy, the full and exclusive right and liberty of making, using, and vending to others to be used, the said improvement, a description whereof is given in the annexed schedule and made a part of these presents.

In testimony whereof I have caused these letters to be made patent and the seal of the Patent Office to be hereunto affixed.

Given under my hand, at the city of Washington, this fourteenth day of June, in the year of our Lord one thousand eight hundred and seventy, and of the Independence of the United States of America the ninety-fourth.

W. T. OTTO,
Acting Secretary of the Interior.

Countersigned and sealed with the seal of the Patent Office.
[SEAL.] SAM'L S. FISHER,
Commissioner of Patents.

(Here follow diagrams marked pp. 34 & 35.)

36 UNITED STATES PATENT OFFICE.

JOHN M. THATCHER, of Bergen, New Jersey.

Improvement in Fire-Place Heaters.

Specification forming part of Letters Patent No. 104,376, dated June 14, 1870.

To all whom it may concern:

Be it known that I, John M. Thatcher, of Jersey City, Hudson county, New Jersey, have invented certain new and useful improvements in fire-place heaters; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists, first, of a base-burning fire-place stove, in which are combined the following elements, namely: A cylinder or body projecting outward from the mantel or frame, a fuel magazine or feeder within the said cylinder, and an opening through which the said magazine can be fed from above. The object of this part of my invention is to increase the capacity of the fuel-magazine; secondly, of a base-burning fire-place stove or heater in which the magazine or feeder is extended to the feed-opening of the outer casing, so that there may be no open space across which to project the fuel on feeding the magazine; thirdly, in the combination, with a fire-place stove or heater, of a feeder or magazine projecting above the top of the heater, so as to increase the capacity of the said magazine.

Figure 1 is a front view of my improved fire-place heater; Fig. 2, a vertical section of the same; Fig. 3, a sectional plan; Fig. 4, a plan view with part of the mantel removed; Fig. 5, a view of the "slicer" or plate to be introduced into the fire-pot under the "feeder," for the purpose of holding up the coal which is unconsumed when the clinkers, ashes, &c., in the lower part of the fire-place have to be removed. Fig. 6 is a plan view of the grate, and Fig. 7 an edge view of the grate.

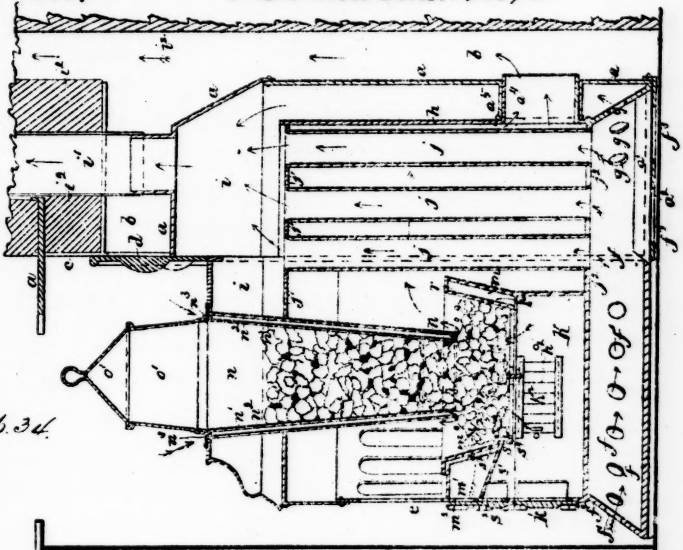
My improved fire-place heater is made in two parts, the part *a* being a stationary concave, fitted to and set in the fire-place *b* below the mantel *c*, and having a front plate or frame, *d*, similar to that of an ordinary grate, and adapted to the shape of the movable part of the heater or stove, the latter being arranged to slide in and out of the stationary concave *a* upon guides a^1 attached to the bottom plate a^2 of the stationary concave. When the heater is not required to be used, the movable part may be withdrawn from the fire-place, and a summer-piece so fitted to the latter as to close the opening in front of the stationary concave.

J. M. Thatcher. Sheet 1 a Sheets.

Fire-Place Heater.

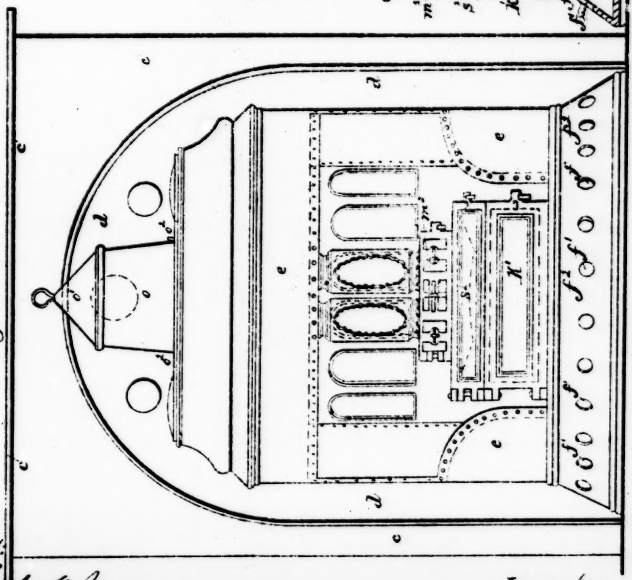
No. 104376. Patented Jun. 14. 1870.

Fig. 2.



No 154. Thatcher Stebbins & al. v Burdes & al. p. 34.

Fig. 1.



Witnesses:
F. C. Haskell
William McIntyre

Inventor:
John M. Thatch...

J. M. Thatcher. Sheet 2. 2 Sheets.

Fire-Place Heater.

No. 104376 Patented Jun. 14. 1870

No. 150 Thatcher Heating Co. Wal v. Burtis Wal p. 35.

Fig. 5

Fig. 6.

Fig. 4.

Fig. 7.

Fig. 3.

Witnesses:
C. C. Tuckwell
William A. Pettigrew

Inventor:
John M. Thatcher.

The object of the guides is to so direct the movable part when it is pushed into the stationary part that the short funnel or outlet a^4 for the products of combustion will pass into the short slightly-conical collar a^5, which projects inward from the concave a, near the bottom plate. A good joint is thus produced, and the leakage of products of combustion into the air-space between the concave and the movable part of the heater is prevented.

It will be observed that the back of the concave a is set at a little distance from the back of the chimney, so that the heat and products of combustion from the flue-passage a^4, which pass through the concave, as before described, may pass up the chimney behind the concave, and thus make the concave a heating-plate for the air, which passes in contact with its opposite side. In the base of the movable part of the heater is an air-chamber, f, which may receive air from the room by holes f^1 in the flaring base-plate f^2, or air may be brought into the chamber from below through holes in the hearth or bottom plate. Some of the air from this chamber f passes through holes g of the flaring base-plate into the space between the concave a and the cylindrical jacket h of the movable part of the heater, and rises up into the distributing-chamber i, from which a hot-air pipe, i^1, conducts the heated air through the chimney i^2 (shown broken off in the drawings) to the room or rooms above in the usual way. The air from the receiving-chamber f also passes up through a set of vertical air-heating tubes, j, at the rear of and partly surrounding the fire-pot, said tubes being secured on the two circular plates j^1 j^2, which form the top of the receiving-chamber, and the bottom of the distributing-chamber, and which, together with the cylindrical jacket h, form the inclosure in which are situated the inclosed ash-pit k, the fire-pot m, and the lower portion of the feeder or magazine n.

In order to protect the lower part of the feeder or magazine from the fire, and also to obtain a circulation of air downward from the top of the stove to the fire-pot to assist in burning the gases, I, in the present instance, construct the magazine with double
37 walls, n^1 n^2, having sufficient room between them for a body of air, and communicating with the outside air by holes n^3 at the top of the feeder, and with the fire-pot by holes at the bottom of the feeder, so that the air shall enter at the top of the air-space, between the walls of the magazine, and pass down to the fire-pot for the purpose of keeping the lower part of the feeder comparatively cool, protecting the coal in the feeder from combustion, and supplying air to burn the gases from the burning coal in the fire-pot.

A more minute description of my improved heater than that given above will be unnecessary, as several of the parts described and illustrated in the drawings form the subjects of other patents, and my present improvements relate especially to the top-feeding arrangements of a fire-place stove or heater. I will now refer more particularly to these improvements.

In constructing my improved heater I have so combined three elements or features as to produce an important result. These features are as follows: First, a cylinder or body of the heater projecting

The object of the guides is to so direct the movable part when it is pushed into the stationary part that the short funnel or outlet a^4 for the products of combustion will pass into the short slightly-conical collar a^5, which projects inward from the concave a, near the bottom plate. A good joint is thus produced, and the leakage of products of combustion into the air-space between the concave and the movable part of the heater is prevented.

It will be observed that the back of the concave a is set at a little distance from the back of the chimney, so that the heat and products of combustion from the flue-passage a^4, which pass through the concave, as before described, may pass up the chimney behind the concave, and thus make the concave a heating-plate for the air, which passes in contact with its opposite side. In the base of the movable part of the heater is an air-chamber, f, which may receive air from the room by holes f^1 in the flaring base-plate f^2, or air may be brought into the chamber from below through holes in the hearth or bottom plate. Some of the air from this chamber f passes through holes g of the flaring base-plate into the space between the concave a and the cylindrical jacket h of the movable part of the heater, and rises up into the distributing-chamber i, from which a hot-air pipe, i^1, conducts the heated air through the chimney i^2 (shown broken off in the drawings) to the room or rooms above in the usual way. The air from the receiving-chamber f also passes up through a set of vertical air-heating tubes, j, at the rear of and partly surrounding the fire-pot, said tubes being secured on the two circular plates j^1 j^2, which form the top of the receiving-chamber, and the bottom of the distributing-chamber, and which, together with the cylindrical jacket h, form the inclosure in which are situated the inclosed ash-pit k, the fire-pot m, and the lower portion of the feeder or magazine n.

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37 walls, n^1 n^2, having sufficient room between them for a body of air, and communicating with the outside air by holes n^3 at the top of the feeder, and with the fire-pot by holes at the bottom of the feeder, so that the air shall enter at the top of the air-space, between the walls of the magazine, and pass down to the fire-pot for the purpose of keeping the lower part of the feeder comparatively cool, protecting the coal in the feeder from combustion, and supplying air to burn the gases from the burning coal in the fire-pot.

A more minute description of my improved heater than that given above will be unnecessary, as several of the parts described and illustrated in the drawings form the subjects of other patents, and my present improvements relate especially to the top-feeding arrangements of a fire-place stove or heater. I will now refer more particularly to these improvements.

In constructing my improved heater I have so combined three elements or features as to produce an important result. These features are as follows: First, a cylinder or body of the heater projecting

outward from the frame or mantel; second, a feeder or fuel-magazine within the cylinder; and, thirdly, an opening through which the said magazine can be fed from above.

While fire-place stoves or heaters with protuberant cylinders and feeders or magazines were known prior to the date of my invention, I am not aware that the above combination of three features above referred to—namely, a top-feeding arrangement, a protuberant cylinder permitting such an arrangement, and a magazine within the cylinder—has ever been known or used prior to my invention of the same.

It has been the practice to so construct base-burning fire-place stoves or heaters that the fuel had to be introduced into the feeder or magazine through a doorway in front; hence the magazine was of a very limited capacity. By so arranging the feed-hole, however, that the fuel can be introduced into the magazine from above, the capacity of the magazine is increased—a result which I especially aimed at in adopting the first part of my invention, namely, the above-mentioned combination, and in the production of my top-feeding, base-burning fire-place stove.

The second part of my invention consists in extending the feeder or magazine to the feed-hole of fire-place stoves. This not only increases the capacity of the magazine to some extent, but an uninterrupted passage or guide is afforded for the introduction of fuel into the magazine through the opening in the outer casing.

The capacity of the magazine is still further increased, in the present instance, by carrying the feeder up above the top of the heater, by placing thereon a movable section, *o*, furnished with a cover, o^1, which has to be lifted off when coal has to be introduced into the magazine.

At and around the base of this removable section *o* is a flange, o^2, perforated with holes to match the holes in the feeder or magazine, so that by turning the removable section, the air-passage through the walls of the feeder may be closed wholly or partially, as desired.

In case the upper section *o* of the feeder should be made in one piece with the feeder, a registering-plate, perforated with similar holes, may be used in place of the flange.

I claim—

1. A base-burning, fire-place stove, in which are combined the following elements, namely, a cylinder or body projecting outward from the mantel or frame, a fuel-magazine or feeder within the cylinder, and an opening through which the said magazine can be fed from above.

2. A fire-place stove or heater, in which the magazine is extended to the feed-opening of the outer casing.

3. In combination with a fire-place heater, a feeder or magazine projecting above the top of the heater, substantially as described.

JOHN M. THATCHER.

Witnesses:

F. C. TREADWELL, JR.

WILLIAM McINTYRE.

38 COMPLAINANTS' EXHIBIT C. R. E. S., Ex'r. Dec. 18th, 1876

(65.)

THE U. S. PATENT OFFICE.

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the records of this office of an assignment recorded in Liber C 13, page 210.

In testimony whereof I, Ellis Spear, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this thirtieth day of November, in the year of our Lord one thousand eight hundred and seventy-five, and of the Independence of the United States the one hundredth.

[SEAL] ELLIS SPEAR,
Acting Commissioner.

(C 13, p. 210.)

Whereas I, John M. Thatcher, of Jersey City, State of New Jersey, did obtain letters patent of the United States, *for* which letters patent bear date the 14th day of June, in the year one thousand eight hundred and seventy, and are numbered 104,376; and

Whereas I have agreed to sell said letters patent and all my right, title, and interest therein to the Thatcher Heating Company:

Now, therefore, this indenture witnesseth: That I, the said John M. Thatcher, for and in consideration of the sum of one dollar to
39 me in hand paid, the receipt of which is hereby acknowledged, have assigned, sold, and set over to the Thatcher Heating Company, a corporation duly incorporated under the laws of the State of New York, all the right, title, and interest which I have in the said invention as secured to me by said letters patent for, to, and in the entire territory of the United States, the same to be held and enjoyed by the said Thatcher Heating Company for their own use and behoof, and for the use and behoof of their successors and assigns, to the full end and term for which said letters patent are granted, and for the term of any renewal, reissue, or extension thereof, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made.

In testimony whereof I have hereunto set my hand and seal this seventeenth day of June, in the year one thousand eight hundred and seventy.

JOHN M. THATCHER. [SEAL]

[5-cent stamp, canceled.]

Sealed and delivered in the presence of—
M. S. THOMPSON.

STATE OF NEW YORK, }
City and County of New York, } *ss:*

On this eighteenth day of June, A. D. 1870, before me personally appeared John M. Thatcher, to me known to be the same person described in and who executed the within instrument, and acknowledged that he executed the same.

JAS. A. RUTHVEN,
Notary Public, N. Y. Co.

Complainants' Exh. C. R. E. S., Ex'r. Recorded June 22, 1870. Ex'd.

40 COMPLAINANTS' EXHIBIT D. R. E. S., Ex'r. Dec. 18th, 1876.

(65.)

THE U. S. PATENT OFFICE.

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the records of this office of an assignment recorded in Liber C 13, page 216.

In testimony whereof I, Ellis Spear, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this thirtieth day of November, in the year of our Lord one thousand eight hundred and seventy-five, and of the Independence of the United States the one hundredth.

[SEAL.]

ELLIS SPEAR,
Acting Commissioner.

(C 13, p. 216.)

Whereas John M. Thatcher did obtain letters patent of the United States of America for the invention of a top-feeding, base-burning fire-place stove, which letters patent bear date on the fourteenth day of June, in the year one thousand eight hundred and seventy, and are numbered 104,376; and

Whereas the said John M. Thatcher has duly assigned, sold, and set over all his interest in said invention as secured to him by the said letters patent to the "Thatcher Heating Company," a corporation organized under the general laws of the State of New
41 York, by an assignment bearing date on the seventeenth day of June, in the year one thousand eight hundred and seventy; and

Whereas by a certain agreement in writing, bearing date on the eighteenth day of May, in the year one thousand eight hundred and seventy, made between the said "Thatcher Heating Company," parties of the first part, B. C. Bibb, trading under the name of Bibb and Company, of the city of Baltimore, in the State of Maryland, party of the second part, Samuel B. Sexton, of the city of Baltimore and State of Maryland, party of the third part, and David Stuart and Richard Peterson, composing the firm of Stuart, Peterson and Company, of the city of Philadelphia and State of Pennsylvania,

parties of the fourth part, it was agreed, among other things, that the parties of the first part thereto, upon obtaining letters patent for the invention above described, would duly sell and convey one equal quarter interest in said letters patent to each of the other parties thereto for the price or sum of one thousand dollars for each quarter interest, such interest to be held, used, and enjoyed by the parties to said agreement only in the manner and subject to the agreement, conditions, and restrictions in said agreement expressly provided, as by reference thereto had will more fully and at large appear:

Now, therefore, this indenture witnesseth: That the said Thatcher Heating Company, in consideration of said agreement, and in further consideration of the sum of one thousand dollars to them in hand paid by said Bentley C. Bibb, trading under the name of Bibb and Company, of Baltimore, Maryland, the receipt of which is hereby acknowledged, have assigned, sold, and set over, and do hereby assign, sell, and set over, unto the said Bentley, C. Bibb, &c., the full and equal undivided one-quarter part of all the right, title, and interest which the said "Thatcher Heating Company" has in the said invention as secured to them by said letters patent and said assignment thereof for, to, and in the entire territory of the United
42 States; to have and to hold the same to the full end of the term for which said letters patent are granted, and until the expiration of any renewal, reissue, or extension thereof, as fully and entirely as the same would have been held and enjoyed by the said "Thatcher Heating Company" had this assignment and sale not been made, the same to be held, used, and enjoyed, however, subject to each and every of the conditions, restrictions, and limitations in said above-mentioned agreement contained.

In witness whereof the Thatcher Heating Company have for themselves and their successors and assigns caused these presents to be signed by their president and corporate seal to be hereunto affixed this eighteenth day of June, in the year one thousand eight hundred and seventy.

[Seal Thatcher Heating Co., N. Y.]

M. S. THOMPSON, *President.*

[Two 5-cent stamps, canceled.]

Witnesses:
J. M. THATCHER.
L. M. THATCHER.

Recorded June 22, 1870. Examined: H. M. H.

43 COMPLAINANTS' EXHIBIT E. R. E S., Ex'r. Dec. 18, 1876.

(65.)

THE U. S. PATENT OFFICE.

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the records of this office of an assignment recorded in Liber C 13, page 211.

In testimony whereof I, Ellis Spear, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto

affixed this thirtieth day of November, in the year of our Lord one thousand eight hundred and seventy-five, and of the Independence of the United States the one hundredth.

[SEAL.] ELLIS SPEAR,
Acting Commissioner.

C 13, p. 211.

Whereas John M. Thatcher did not obtain letters patent of the United States of America for the invention of a top-feeding, base-burning fire-place stove, which letters patent bear date on the fourteenth day of June, in the year one thousand eight hundred and seventy, and are numbered 104,376; and

Whereas the said John M. Thatcher has duly assigned, sold, and set over all his interest in said invention as secured to him by the said letters patent to the "Thatcher Heating Company," a corporation authorized under the general laws of the State of New York, by an assignment bearing date on the seventeenth day of June, in the year one thousand eight hundred and seventy; and

44 Whereas by a certain agreement in writing, bearing date on the eighteenth day of May, in the year one thousand eight hundred and seventy, made between the said "Thatcher Heating Company," parties of the first part, B. C. Bibb, trading under the name of Bibb & Company, of the city of Baltimore, in the State of Maryland, party of the second part, Samuel B. Sexton, of the city of Baltimore and State of Maryland, party of the third part, and David Stuart and Richard Peterson, composing the firm of Stuart, Peterson & Company, of the city of Philadelphia and State of Pennsylvania, parties of the fourth part, it was agreed, among other things, that the parties of the first part thereto, upon obtaining letters patent for the invention above described, would duly sell and convey one equal quarter interest in said letters patent to each of the other parties thereto for the price or sum of one thousand dollars for each quarter interest, such interest to be held, used, and enjoyed by the parties to said agreement only in the manner and subject to the agreements, conditions, and restrictions in said agreement expressly provided, as by reference thereto will more fully and at large appear:

Now, therefore, this indenture witnesseth: That the said Thatcher Heating Company, in consideration of said agreement, and in further consideration of the sum of one thousand dollars to them in hand paid by Samuel B. Sexton, of Baltimore, Maryland, the receipt of which is hereby acknowledged, have assigned, sold, and set over, and do hereby assign, sell, and set over, unto the said Samuel B. Sexton the full and equal undivided one-quarter part of all the right, title, and interest which the said "Thatcher Heating Company" has in the said invention as secured to them by said letters patent and said assignment thereof for, to, and in the entire territory of the United States; to have and to hold the same to the full end of the term for which letters patent are granted, and until the expiration of any renewal, reissue, or extension thereof, as fully and and entirely as the same would have been held and enjoyed by the

said "Thatcher Heating Company" had this assignment and
45 sale not been made, the same to be held, used, and enjoyed,
however, subject to each and every of the conditions, restrictions, and limitations in said above-mentioned agreement contained.

In witness whereof the Thatcher Heating Company have for themselves, their successors and assigns, caused these presents to be signed by their president, and their corporate seal to be hereunto affixed this eighteenth day of June, in the year one thousand eight hundred and seventy.

[Seal Thatcher Heating Company, N. Y.]

M. S. THOMPSON, *President.*

[Two 5-cent stamps, canceled.]

Witnesses:

J. M. THATCHER.
L. M. THATCHER.

Recorded June 22, 1870.

46 COMPLAINANTS' EXHIBIT F. R. E. S. Dec. 18, 1876.

U. S. Circuit Court of New Jersey.

(65.)

THE U. S. PATENT OFFICE.

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the records of this office of an assignment recorded in Liber C 13, page 213.

In testimony whereof I, Ellis Spear, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this thirtieth day of November, in the year of our Lord one thousand eight hundred and seventy-five, and of the Independence of the United States the one hundredth.

[SEAL.] ELLIS SPEAR,
Acting Commissioner.

C 13, p. 213.

Whereas John M. Thatcher did obtain letters patent of the United States of America for the invention of a top-feeding, base-burning
47 fire-place stove, which letters patent bear date on the fourteenth day of June, in the year one thousand eight hundred and seventy, and are numbered 104,376;

And whereas the said John M. Thatcher has duly assigned, sold, and set over all his interest in said invention as secured to him by the said letters patent to the "Thatcher Heating Company," a corporation organized under the general laws of the State of New York, by an assignment bearing date on the seventeenth day of June, in the year one thousand eight hundred and seventy;

And whereas by a certain agreement in writing, bearing date on the eighteenth day of May, in the year one thousand eight hundred

and seventy, made between the said "Thatcher Heating Company," parties of the first part; B. C. Bibb, trading under the name of Bibb & Company, of Baltimore, in the State of Maryland, party of the second part; Samuel B. Sexton, of the city of Baltimore and State of Maryland, party of third part, and David Stuart & Richard Peterson, composing the firm of Stuart, Peterson & Company, of the city Philadelphia and State of Pennsylvania, parties of the fourth part, it was agreed, among other things, that the parties of the first part thereto, upon obtaining letters patent for the invention above described, would duly sell and convey one equal quarter interest in said letters patent to each of the other parties thereto, for the price or sum of one thousand dollars for each quarter interest, such interest to be held, used, and enjoyed by the parties to said agreement only in the manner and subject to the agreements, conditions, and restrictions in said agreement expressly provided, as by reference thereto will more fully and at large appear:

Now, therefore, this indenture witnesseth: That the said Thatcher Heating Company, in consideration of said agreement and in further consideration of the sum of one thousand dollars to them in hand paid by said David Stuart and Richard Peterson, composing the firm of Stuart, Peterson & Company, of Philadelphia, Pennsylvania, the receipt of which is hereby acknowledged, have assigned,
48 sold, and set over unto the said Stuart, Peterson & Company, the full and equal undivided one-quarter part of all the rights, title, and interest which the said "Thatcher Heating Company" has in the said invention as secured to them by said letters patent and said assignment thereof for, to, and in the entire territory of the United States; to have and to hold the same to the full end of the term for which said letters patent are granted and until the expiration of any renewal, reissue, or extension thereof, as fully and entirely as the same would have been held and enjoyed by the said "Thatcher Heating Company" had this assignment and sale not been made, the same to be held, used, and enjoyed, however, subject to each and every of the conditions, restrictions, and limitations in said above-mentioned agreement contained.

In witness whereof the Thatcher Heating Company have for themselves and their successors and assigns caused the presents to be signed by their president and corporate seal to be hereto affixed this eighteenth day of June, in the year one thousand eight hundred and seventy.

[Seal Thatcher Heating Company, N. Y.]

M. S. THOMPSON, *President.*

[Two 5-cent stamps.]

Witnesses:

J. M. THATCHER.
L. M. THATCHER.

Recorded June 22, 1870.

49 United States Circuit Court, Southern District of New York.

THE THATCHER HEATING COMPANY and Others

vs.

JOHN H. BURTIS and JOHN M. GRAFF.

Testimony taken on the part of the complainant in reply under and pursuant to the 67th rule of the Supreme Court of the United States, as amended, before John A. Shields, Esq., a standing examiner of said Court.

NEW YORK, *March* 3, 1879—11 o'clock a. m.

Met pursuant to notice.

Present: B. F. Lee, Esq., of counsel for complainant, and A. J. Todd, Esq., of counsel for defendants.

JOHN M. THATCHER, a witness on behalf of the complainants, being duly sworn deposes and says:

Q. 1. What is your name, age, residence, and occupation?

50 A. John M. Thatcher; I am 61 years of age; I reside in Jersey City, New Jersey, and I am a manufacturer and inventor of stoves, furnaces, and ranges.

Counsel for complainants offers in evidence a certified copy of the file-wrapper and contents in the matter of the letters patent granted John M. Thatcher, dated June 14, 1870, No. 104,376, for improvement in fire-place heaters, and the same is marked Compl'ts' Exh. Thatcher File and Contents, J. A. S., Ex'r.

Q. 2. Are you the person named as inventor in the exh. just offered in evidence?

A. I am.

Q. 3. It appears by said exh. that the model belonging to letters patent No. 104,376, dated June 14, 1870, was filed in the Patent Office on March 24, 1868. Please state where and when that model was made.

A. It was made in the shop of Thatcher & Haviland, 602 Broadway, New York, between the 10th day of February and the 14th day of April, 1867.

Q. 4. How do you fix those dates?

A. I hired Thomas Brennan, who commenced on the 10th of February, 1867, to make the model, and — was one of the first things about that he done when he came there. The time occupied in making it, to the best of my recollection, was about ten days.

Q. 5. Why do you specify the date, April 14, 1867, in your answer to Q. 3?

A. Because on that day I hired Raymond Salt, and the model was finished prior to that time.

Q. 6. Where is Raymond Salt now, and what is his business?

A. He is working for me and has charge of my shop, and is a tinsmith by trade.

Q. 7. Has he been in your employ ever since April 14, 1867?

51 A. He has been in my employ ever since.

Q. 8. Was this invention put into actual use by you at any time after February 10, 1867, by the construction of fire-place heaters constructed in accordance with said patent No. 104,376?

A. It was.

Q. 9. State when and by whom the working drawings for the patterns for the fire-place heater constructed according to your patent were made.

A. They were made about the 25th or 26th of April, 1867, by me.

Q. 10. How do you fix the date stated in your last answer?

A. I find upon the cash-book of Thatcher & Haviland on the 24th April, 1867, an entry for drawing paper on which the working drawings were made by me immediately after the purchase of that paper.

Q. 11. How soon after that paper was bought had you finished these working drawings?

A. It could not have exceeded three days, but was likely to be done in much less time.

Q. 12. How soon after these drawings were finished were the working patterns commenced to be made from these drawings?

A. These drawings were put in the hands of the pattern-maker immediately, from which he commenced to make the wooden patterns.

Q. 13. What was the name of this pattern-maker, and what has become of him?

A. R. K. Cavanagh; he resided at that time in Jersey City; he is now dead.

Q. 14. What has become of those working drawings?

A. I was informed by his son, and his wife also, since his death that all his drawings were destroyed shortly after his death, when they were cleaning up things.

Q. 15. Can you tell me the present residence of Thomas Brennan?

A. I cannot, sir; he does not seem to have any residence.

52 Q. 16. Have you made any effort to find him within the past twenty days; and, if so, with what result?

A. I have, and have been unable to find him. I went to the address given by him where I could find him, but they were unable to tell me where he was; the last they knew of him he was working in Prospect Park, Brooklyn. I went there to find out whether he was there or not; they couldn't tell me where he was to be found; they had not seen him for a long time. I saw his own son also; he could not tell where he was to be found. From all I could learn he seemed to have no stated residence where he could be found.

Q. 17. When and where was a completed fire-place heater constructed from those patterns, in accordance with what is shown in letters patent No. 104,376, actually set up and put in operation with a fire in it?

A. In September, 1867, at 602 Broadway, New York, at the place of Thatcher & Haviland.

Q. 18. How did such heater differ, if at all, from what is shown in the drawings of your patent No. 104,376?

A. The only difference I see is that the doors of that heater that lead to the ash-pit, and the opening for slicing the fire, which doors are marked on the drawing S^2 and K′, were divided in two parts in that heater, while they are single doors in the drawing.

Q. 19. What was the working of that heater so set up and operated in September, 1867, in respect to its operation being successful or otherwise?

A. It worked entirely successful.

Q. 20. Was any alteration ever made in the model between the time that it was constructed—between Feb. 10 and April 14, 1867—and the time that it was actually filed in the Patent Office?

A. None whatever.

Q. 21. For what purpose did you cause Brennan to make this model?

A. For the purpose of a Patent Office model to be de-
53 posited in the Patent Office; I intended to make application for a patent.

Q. 22. How long before the making of that model was the invention which was exhibited in it, and which is now the subject of letters patent No. 104,376, complete in your mind?

A. For at least six months prior to the commencement of that model.

Q. 23. After the setting up of the first heater in September, 1867, as you have stated, were any others set up between that time and May 1st, 1868?

A. There were.

Q. 24. How many such fire-place heaters constructed in accordance with said patent No. 104,376 were actually set up on May 1st, 1868?

A. Nearly twenty.

Q. 25. Where were they set up?

A. They were set up nearly all in Jersey City, I believe in dwellings—mainly in Jersey City.

Q. 26. Were any of these new houses that have been recently completed for the annual season for the sale of houses, which ends May 1st?

A. They were all new houses.

JOHN M. THATCHER.

Sworn to before me this March 3, 1879.

——— ———,
Examiner, &c.

Adjourned to 3 p. m.

3 O'CLOCK P. M.

Met pursuant to adjournment.
Present: Counsel as before.

Cross-examination of Mr. THATCHER by Mr. TODD:

54 X Q. 27. Have you any memorandum or record in your books of account referring to said model or the making of it?

A. I have no record showing work on the model, but I have a record of the payment of money to Thomas Brennan, who was hired to make the model.

X Q. 28. Was Thomas Brennan hired to do that work only, or to work for you generally?

A. My recollection about it is that I made some inquiry for a good workman to make some models, and Brennan was recommended as being a competent workman, and accustomed to model work; at the same time he had a promise of other work to suit him.

X Q. 29. What other models did you desire to have made at that time?

A. A furnace model.

X Q. 30. Did you have such furnace model made at the same time that you had the stove model made?

A. I think he followed right up, making the furnace model immediately after the completion of the fire-place-heater model.

X. Q. 31. Did you have the furnace model patented; if so, when?

A. I did, in November 19, 1867.

X Q. 32. When did you apply for the patent on the improvement in furnaces?

A. I don't think I could tell without referring to the papers, but my impression is it was along in the spring of 1867. I think the model went into the hands of Mr. Treadwell immediately after its completion.

X Q. 32½. How long was Thomas Brennan in your employ?

A. Some considerable time. I don't know as I could tell now precisely.

X. Q. 33. What length of time; would not your books show payments to him?

A. I can ascertain the precise time. I find an entry of payments to him in May, 1868. I think he worked for the Thatcher Heating Co. after that for a short time.

55 X Q. 34. How long was the shop of Thatcher & Haviland at 602 Broadway?

A. During the continuance of that copartnership, up to May, 1868.

X Q. 35. Did Raymond Salt continue with your firm, Thatcher & Haviland, up to May, 1868, and then with the Thatcher Heating Co. after that date?

A. He did.

X Q. 36. Did you make working drawings of the furnace of which you say Thomas Brennan made the model?

A. I did.

X Q. 37. When did you make them?

A. I made those in 1866?

X Q. 38. When in 1866?

A. Along in the mid-summer of 1866.

X Q. 39. How do you know this?

A. I know it from the books and the men employed to make the patterns.

X Q. 40. When did you look at the books to get such date?

A. I couldn't tell precisely when it was, but it must be within a year.

X Q. 41. The drawing paper which you say you find an entry for in your cash-book, April 24, 1867; please let me look at it?

A. The following is the entry: April 24, 1867, store expenses, paid for drawing paper, $1.00.

X Q. 42. Do you mean by "store" expenses "shop" expenses or "office" expenses?

A. That entry is taken from my own memorandum, and that entry should have been written there in the cash-book in this wise: Pattern or patent account instead of store expenses. This was an a[illegible] of the book-keeper in placing it to the wrong account.

X Q. 43. Is not the entry contained on page 43 following this entry as follows: "May 11, 1867—By patent, paid fee for filing
56 application for patent for improvement in furnaces, $15," and does not this refer to your application for said improvement on furnaces?

A. It does.

X Q. 44. Did you make the drawings—that is, do all the drafting—required for the firm of Thatcher & Haviland?

A. My recollection is I did.

X Q. 45. Is there not on pages 45, 47, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 77, and 79 of your cash-book payments marked against pattern account running from May, 1867, through the rest of the year? Now, would you not require drawings to be made for these patterns, and did you make such drawings?

A. It would require drawings. My recollection is that I made them, and also made drawings for patterns made in September, 1866, and onward.

X Q. 46. I find in your cash-book such entries as this: "May 1, 1867, by store expenses, paid for sundry items as per M. B. K., $1.04." Can you, at this day, say what such items were?

A. I don't think that I could; they are probably small items, perhaps, of ferriage, rides, mails, or something of that kind.

X Q. 47. The entries for "patterns" expenses do not state what such patterns were, do they?

A. They do not, I believe, sir.

X Q. 48. These entries, which I find run from the spring of 1867 through the remainder of the year, were "patterns" expenses. Can you, at this day, say of what patterns they were expenses for.

A. Pretty generally I can; the first work that Mr. Cavanagh done for me was on the fire-place heater, and he was the only man that did work on it; he commenced to work on it quite early in the

spring, whilst he was working for another party, and all he done for some considerable time was all he could do in overtime, as his daily labor was employed at another concern. The other pat-
57 tern-makers that worked for me worked on various kinds of patterns, namely, alterations and changes.

X Q. 49. I find sums paid various parties in your cash-book for work on patterns during the fore and middle part of the year 1867. I do not find any money paid any man by the name of Cavanagh during that time, but I do find that Cavanagh was paid for work on patterns January 4th and 17th, 1868; also Feb. 1st, 8th, 17th, 22d, and 29th; also in March, and the 1st entry I find of his being paid anything in 1867 is Sept. 7th. Am I not correct by this reference to your books?

A. I think so; yes, sir; I think it is correct. Mr. Cavanagh had taken this pattern to make with a contingency that we would have to allow him to make it on overtime, or nearly so, but didn't know but that it would be entirely so, and there was no money paid to him until about the completion of the patterns; then he began to draw some money, and said he didn't require it, as he was drawing weekly from his employers, and continued to draw money thereafter until it was paid up, and finally became permanently engaged with us until his death, or nearly so.

X Q. 50. I find the following entry: "March 26th, 1868, patterns paid for ornaments to cover of feed, 60c." Did not this have reference to your top-feed fire-place heater?

A. It did, sir. Some alteration was made in the cover to the feed of the fire-place stove, as it was thought not to be ornamental quite.

X Q. 51. I find the following as the first entries to Cavanagh in your book:

1867,	September	7.	By patterns paid	Cavanagh		$20 00
	"	14.	"	"		20 00
	"	17.	"	"		10 00
	"	28.	"	"		50 00
	October	12.	"	"		25 00
	"	19.	"	"		25 00
	"	26.	"	"		20 00
58	Nov.	2.	"	"		10 00
	"	19.	"	"		40 00
	"	30.	"	"		20 00
	Dec.	13.	"	"		20 00
	"	23.	"	"		30 00

Am I correct?

A. I believe so, sir.

X Q. 52. Where did Mr. Cavanagh work at the time you asked him to commence to make patterns for you?

A. He worked for Mr. Simons, in Jersey City.

X Q. 53. What patterns Mr. Cavanagh made for you or your firm he made at your firm's shop, did he not?

A. Not all of them, he didn't.

X. Q. 54. Where else did he make them?

A. He made the fire-place heaters patterns at Simons', in Jersey City.

X Q. 55. What Simons, in Jersey City? Give full name and address.

A. J. H., I think it is. He is in Stuban street; I think there is no number at all.

X Q. 55½. I see entries of payments to Simons during the year 1867; for instance, "June 29, paid him bill for castings, $31.76." Is this the same Simons?

A. It is. My impression is those are some castings from patterns which Cavanagh made of the fire-place heater; that they were taken off as fast as the wooden patterns were made.

X Q. 56. How is it that you paid the proprietor, Simons, for castings from those patterns, if you did, but did not pay him for the patterns, but paid his employee instead?

A. I had no business to pay him for the patterns, because he did not make them; he simply made the castings from the patterns.

X Q. 57. Did Holbrow, Gilbert, Yereance, & Smith work for you or your firm on patterns in 1867, up to September, and did they not do their work at your shop?

A. They each worked for us; Holbrow, in Greenpoint;
59 Yereance, down in Mercer street, I think, and Gilbert, at our store. Smith dressed up iron patterns only; he had nothing to do with wooden.

X Q. 58. Was Simons aware that Cavanagh worked on your fire-place heater patterns overtime?

A. That I cannot answer. I don't know, as I never had any conversation with him on the subject.

X Q. 59. What do you mean by Cavanagh's working overtime?

A. His own time, morning or evening, before or after his work.

X Q. 60. How was he employed by Simons; do you know?

A. He was employed weekly by him, I believe. I never made the enquiry.

X Q. 61. Why did you go to him instead of to his employer to get the patterns made?

A. Because I wouldn't go to his employer at all. I would go directly to the man who I wanted to execute the work.

X Q. 62. Why did you not go to him to have him execute the work for you on account of his employer?

A. Because his employer was wholly unacquainted with pattern work and had to rely on Mr. Cavanagh.

X Q. 63. Why did not the employee do the work for and on account of his principal, Mr. Simons?

A. I was not aware that Mr. Simons was having any pattern work done for any person except for himself. That's the reason mainly why I applied directly to Mr. Cavanagh to make this pattern.

X Q. 64. Why did not you have your own pattern-makers or those employed in your own shop make them?

A. Two reasons; one was that they couldn't be taken from the work they were on, and the other, I didn't consider them as competent to make them as Mr. Cavanagh.

X Q. 65. Had Mr. Cavanagh previously made any patterns for you?

60 A. I think not, but I had a long acquaintance with him. I was the next neighbor to him for several years. I saw a great deal of his work, and he was a person in whom I had considerable confidence and a great desire that he should make that pattern. I told him I would give him his own time if he would only take it to make it.

X Q. 66. I find that you paid Simons for castings as follows:

1868.	
March 4	$42 84
April 25	25 98
April 30	56 89

There is nothing stated as to what these are for; can you at this distance of time state?

A. Those are castings from the iron patterns of that fire-place heater to make complete fire-place heaters, which were put up in houses.

Adjourned to Tuesday, March 4, 1879, at 11 o'clock a. m.

NEW YORK, *March 10th*, 1879—11 o'clock a. m.

Met pursuant to adjournment.

Present: B. F. Lee, Esq., of counsel for complainants; A. J. Todd, Esq., of counsel for defendants.

Cross-examination of Mr. THATCHER by Mr. TODD continued:

X Q. 67. When did Mr. Cavanagh first actually enter your shop, of Thatcher & Haviland, as an employee?

61 A. I think in the winter of 1867, late in the fall or in the winter of 1867 and 1868; it's possible he did not enter into our shop until the spring of 1868.

X Q. 68. When did you first try the furnace which you say you applied for a patent for in the spring of 1867?

A. In part it was tried in 1866; the whole furnace as shown in that model has never been made.

X Q. 69. Is it not the custom of stove men to try stoves, heaters and furnaces the season before they make application for patent, in order to see whether the improvement is a useless or a useful one?

A. I have very little knowledge of what others do.

X Q. 70. How long have you been in the stove, heater, and furnace business?

A. I commenced in stoves in 1847, and have been more or less engaged in stove, range, and furnace business ever since.

X Q. 71. Are you acquainted with the stove trade generally?

A. My acquaintance has been more particularly connected with furnaces and heating apparatuses, and some acquaintance with the stove business.

X Q. 72. When were the furnaces for which you made an application for a patent in the spring of 1867 first actually put up in houses?

A. There never has been any furnace put up in whole as shown in model; only in part; this was in 1866 and 1867 and ever since.

X Q. 73. How do you fix the date as September, 1867, as the time when you first put up a completed fire-place heater in accordance with letters patent 104,376.

A. I fix the date from the first payment to Mr. Cavanagh, which, so far as my recollection goes, was about the time that Mr. Cavanagh got through making the patterns. The castings were taken off from the wooden patterns as fast as they were completed, and by the time they were completed we were ready to try a heater.

62 X Q. 74. The items in Sept., 1867, of payments to Cavanagh for work on patterns do not state on what kind of patterns such payments were made. I am referring to pages 65 to 69, inclusive, of the Thatcher & Haviland cash-book here produced; am I not correct?

A. You are.

X Q. 75. You say, in answers to 24th and 25th questions, that nearly 20 such fire-place heaters were actually in use by May 1st, 1868. How do you fix the number as 20?

A. A Mr. Wheeler, of Jersey City, got five; Mr. Edward Coles, of Jersey City, got eight; Grace church parsonage, of Jersey City, got two; and there were some several others that I don't remember exactly where they are now.

X Q. 76. Is this all from your recollection and have you not books showing the fact of the furnishing to these parties of those heaters; and, if so, will you produce the book or books?

A. It is from recollection and from books. I find on the order-book of Thatcher & Haviland, at page 62, Feb'y 7, 1868, B. J. Knapp, 212 West 17th street, one fire-place heater as soon as possible, $90. On page 64, Feb'y 27, Mr. Coles, from Jersey City, wishes Mr. Thatcher to call and examine 8 houses, building with a view of putting in fire-place heaters of small size. Page 68, March 19th, 1868, J. W. Van Winkle, Passaic, New Jersey, one illuminator fire-place heater, put up with four registers, for about $100. On the same page, March 20th, Edward Coles, Jersey City, 8 fire-place heaters, put up complete, for $800. On the same page and on the same date, D. Leinan, Jersey City, 2 fire-place heaters in the Episcopal parsonage. Page 69, March 23d, D. De Long, of 229 East Broadway, N. Y., one fire-place heater, put up to 3d floor, in Jersey avenue, Jersey City, $110. On page 69, March 31st, Mrs. Cudlip, one fire-place heater, same as D. De Long, $110.

63 X Q. 77. This is your book, showing when the orders were taken, is it not?

A. It is.

X Q. 78. Did you not make and sell, during the years 1866 and 1867 and 1868, fire-place heaters of the ordinary kind?

A. I did not.

X Q. 79. Do you mean that the first fire-place heater that Thatcher & Haviland ever sold contained the improvements shown in the patent 104,376?

A. I believe they were the first we sold; I am quite sure of it.

X Q. 80. Where is the book containing the dates when the parties you have mentioned in your answers to X 75 and X 76 actually got those heaters put in?

A. We had a book of delivery, but I don't know to-day where that book is. Possibly I can find it. I have not looked for it.

Counsel for deft's requests the witness to look for such book and to produce it, if he can find it; also to please permit the cash-book and order-book referred to in this examination to be marked as exhibits for identification in this case. Witness is requested also to produce the book or books showing the date of charge against each respective party named for those fire-place heaters.

JOHN M. THATCHER.

Adjourned to Tuesday, March 11th, 1879, at 11 a. m.

NEW YORK, *March 11th*, 1879—11 o'clock a. m.

Met pursuant to adjournment.

64 Present: B. F. Lee, Esq., of counsel for complainants, and A. J. Todd, counsel for defendants.

Cross-examination of Mr. THATCHER continued by Mr. TODD:

X Q. 81. Have you found the delivery book referred to in the last answer?

A. I have not. On examination I find there were no delivery books kept at that time. I have here the charge-book called for or day-book of original entry of Thatcher and Haviland.

X Q. 82. Please look at the cash-book, which was requested to be marked as an exhibit for identification on the part of complainants, and state when the parties mentioned in the 75 and 76 answers as parties who were to have fire-place heaters paid for such heaters.

Objected to as entirely irrelevant.

A. The cash-book referred to don't show when the payment was for the heaters referred to in the 75 and 76 answers.

X Q. 83. Are not the last entries in that cash-book as follows: Debit side, August 7th, 1868; credit side, August 31st, 1866?

The same objection.

A. Debit side, August 7th: The Thatcher Heating Co. received of them $1,000. Credit side, August 31st: W. C. Rogers paid them balance of account, $48.19.

X Q. 84. If these fire-place heaters were ever delivered and paid for, would not the payment be entered in some book subsequent to August, 1868; and, if so, where is that book?

The same objection.

65 A. They would not, for the reason that Thatcher & Haviland sold out their entire interest to the Thatcher Heating Co. between the 1st *to* 5th of May, 1868.

X Q. 85. Will you produce the cash-book of the Thatcher Heating Co. for the year 1868?

A. I can produce it.

X Q. 36. Does not the day-book which you have produced merely refer to orders take from the parsonage, Coles, Winkle, and De Long for fire-place heaters agreed to be furnished, or agreed to be set up, and not as actually furnished such place and parties?

A. As I understand them and all other entries on the day-book, the actual charges for work done and goods delivered irrespective of form of entry.

X Q. 87. Do you not mean by these forms of entries on pages 74 and 75 of the day-book only to give the cost of doing the work and not to show that the work has actually been done, but that it will be done at some future day?

A. As I understand these entries, they are actually and absolute charges against these parties. I did not make the entry myself; therefore I don't know what the man meant when he couched it in such language.

X Q. 88. Will you produce the delivery book or books of the Thatcher Heating Co. for the year 1868, kept by them after the month of March to the end of the year?

A. I cannot tell when the Thatcher Heating Co. commenced to keep a delivery book. I will look and produce whatever I can find.

X Q. 89. Will you permit the day-book of Thatcher & Haviland here produced to be marked as an exhibit for identification?

A. I have no objections to marking any of the books, although they are somewhat cumbersome.

Counsel for complainants requests defendants' counsel to ask for what books he wants in one request now, in order that we
66 may understand precisely what the witness has to bring; otherwise this examination may become interminable. Please summarize now all the books wanted that have not already been produced.

Defendants' counsel says that he has already done so in X Q. 85 and X Q. 88, and requests the witness to bring such books here at the next sitting for the examination of witnesses.

[A.] I will have the books brought before two o'clock. It is 12.45 o'clock now.

X Q. 90. Have you brought the books requested?

A. I have got two delivery books, commencing Oct. 21, 1868. I have also brought the company's cash-book, kept by the treasurer.

X Q. 91. Will you give from the cash-book items of payment from the parties mentioned in your answers to X Q. 75 and X Q. 76 *questions?*

A.—

June	1,	1868.	Received	from	Jas S. Noyes	$566 67
"	11,	"	"	"	J. W. Van Winkle	110
August	14,		"	"	J. S. Noyes	133 03
Sept.	2,		"	"	Mrs. Cudlip	110
"	4,		"	"	note J. S. Wheeler	375

Noyes was the agent of Edward Coles. I am unable to follow from whom cash was received after January 1, 1869, as the entries after that date are simply "cash," with very few exceptions, and those exceptions do not give any light particularly from whom the collections are made.

Counsel for defendants requests that the two cash-books, the day-book, and the two delivery books be marked compl't's' exhibits for identification.

JOHN M. THATCHER.

67 Redirect:

92 R. D. Q. In X Q. 46 you were asked concerning an item of $1 04; is that item correctly copied upon the record? And, if not, give the item in full as it exists in the cash-book.

A. It is not correctly copied. The item is the only item dated May 1, 1867, and should read thus: "By store expenses, paid for sundries as per mem. b'k, 0.34." I had the cash-book before me when I answered X Q. 46, and I did not observe that the amount was wrongly put.

93 R. D. Q. In X Q. 51 are there any omitted items.

A. I find one, "1867, Sept. 21, by patterns paid Cavanagh, $20."

94 R. D. Q. Can you produce a copy of the illustrated catalogue of the J. L. Mott Iron Works, printed in the year 1871? And, if yea, please produce the same.

A. I have one of their 1871 catalogues, which I produce.

Catalogue referred to by the witness offered in evidence and marked Comp't's' Exh. "Mott Catalogue," J. A. S. Ex'r.

95 R. D. Q. Have you heard the testimony of Jordan L. Mott in this case? And, if so, state whether or not you are acquainted with the fire-place heater that he calls the "Defiance fire-place heater."

A. I heard the testimony of Jordan L. Mott, and I know the heater referred to.

96 R. D. Q. Is that heater referred to in the Exhibit "Mott Catalogue;" and, if so, on what page?

A. It is at page 20.

The parts of the book intended to be referred to in this cause are the inside title page and page 20.

68 JOHN M. THATCHER.

Subscribed and sworn to before me this 11th day of March, 1879

JOHN A. SHIELDS,
Examiner, &c.

Adjourned to Thursday, March 13th, 1879, at 11 o'clock a. m.

Re-X 97. Is this the first catalogue of Mott's containing the cut of the Defiance fire-place heater?

A. That I don't know.

JOHN M. THATCHER.

Adjourned to Monday, March 17th, 1879, at 11 a. m.

MONDAY, *March 17th*, 1879—11 o'clock a. m.

Present: Counsel as before.

Adjourned to Friday, March 21st, 1879, at 11 o'clock a. m.

NEW YORK, *March 21st*, 1879—11 o'clock a. m.

Met pursuant to adjournment.

Present; B. F. Lee, Esq., of counsel for comp'ts, and A. J. Todd, Esqr., of counsel for def'ts.

Mr. JOHN M. THATCHER recalled as a witness on behalf of the complainants.

Q. 98. Can you produce a duplicate of the model that you testify was made in your shop by Thomas Brennan in the spring of 1867? And, if yea, please do so.

A. I can and do produce such duplicate model.

69 Counsel for comp'ts offers in evidence the duplicate model referred to by the witness, said model being also certified under the seal of the Patent Office as a true duplicate of the model filed in the matter of letters patent No. 104,376, dated June 14, 1870, and the same is marked Comp't's' Exh. Thatcher's Model, J. A. S., Ex'r.

Q. 99. How perfectly does Exh. Thatcher Model show a fire-place heater to one skilled in the art?

A. It shows it exactly. It shows a practical fire-place heater in all its working parts and made in every respect as shown in the patent 104,376.

JOHN M. THATCHER.

Sworn to before me this March 21st, 1879.

JOHN A. SHIELDS,
Examiner, &c.

EXHIBIT THATCHER FILE-WRAPPER AND CONTENTS. J. A. S., Ex'r.

(65.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE.

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the files of this office of the file-wrapper and contents in the matter of the letters patent granted John M. Thatcher, dated June 14, 1870, No. 104,376, for "improvement in fire-place heaters."

In testimony whereof I, W. H. Doolittle, Acting Commis-
70 sioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this twentieth day of February, in the year of our Lord one thousand eight hundred and seventy-eight, and of the Independence of the United States the one hundred and second.

[SEAL.] W. H. DOOLITTLE,
Acting Commissioner.

$15 cash, 2 dr'gs.

335 BROADWAY, NEW YORK, 23 *March*, 1868.

Hon. Commissioner of Patents.

SIR: Herewith *is* petition, power of attorney, specification, oath, and $15 application fees, for application [of] John M. Thatcher for improvement in fire-place heaters.

Respectfully, F. C. TREADWELL, JR.,
Att'y for J. M. Thatcher.

(Endorsement.)

Petition.

To the Hon. Commissioner of Patents:

The petition of John M. Thatcher, of Bergen, in the county of Hudson, and State of New Jersey, respectfully showeth that he has invented new and useful improvements in fire-place heaters which he verily believes *has* not been known or used prior to the invention thereof by your petitioner. He therefore prays that let-
71 ters patent of the United States may be granted to him therefor, vesting in him and his legal representatives the exclusive right to the same, upon the terms and conditions expressed in the acts of Congress in that case made and provided, he having paid fifteen dollars into the Treasury and complied with the other provisions of said acts.

JOHN M. THATCHER.

Oath.

STATE OF NEW YORK, }
County of New York, } *ss:*

John M. Thatcher, being duly sworn, solemnly declares and deposes that he verily believes himself to be the original and first inventor of the improvements in fire-place heaters herein described, and that he does not know or believe the same *was* ever before known or used, and that he is a citizen of the United States.

JOHN M. THATCHER.

Subscribed and sworn before me this 17th day of March, 1868.

[L. S.] WM. F. LETT,
Notary Public for N. Y. City.

Power of Attorney.

I hereby constitute Francis C. Treadwell, Jr., of the city of New York, my attorney to file this application, withdraw or amend the same, conduct all correspondence, receive the patent when granted, and, generally, to do whatever I might personally in the premises.

JOHN M. THATCHER.

[50-cent stamp, canceled.]

72 *Specification.*

Erase and insert A., March 24, 1870.

Be it known that I, John M. Thatcher, of Bergen, county of Hudson, State of New Jersey, have invented certain new and useful improvement in fire-place heaters, and I do hereby declare that the following is a full and correct description thereof, reference being had to the annexed drawings and to the letters of reference thereon.

Nature of invention wanting.

Fig. 1 of the drawings is a front view of my improved fire-place heater as set in a fire-place; Fig. 2, a longitudinal section; Fig. 3, a horizontal section; Fig. 4, a plan view with mantel and chimney broken away; Fig. 5, view of the "slicer" or plate to be introduced into the fire-pot under the "feeder," to hold up the coal that is unconsumed when the clinker and ashes, &c., in lower part of grate is to be removed; Fig. 6, plan view of grate; Fig. 7, front view of grate.

My improved fire-place heater is made in two parts, the part *a* being a stationary concave fitted to and set in the fire-place *b* below the mantel *c*, and having a face or front plate, *d*, like a grate front, but made to fit the contour of the movable part *e*, which slides in and out of the stationary concave *a*, on sides a^1, on the bottom plate a^2 of the stationary concave, which fit ways on the bottom of the movable part of the heater. When the heater is not required to be used the movable part may be removed and a summer piece put in to close up the opening in front of the stationary concave, giving it the
73 appearance of a grate front with the summer piece in. The object of the slides is to guide the movable part when it is being pushed into the stationary part, so that the short funnel or draft outlet a^4 for products of combustion will enter and pass into the short, slightly conical collar a^5, which projects inwards from the back of the concave *a* near the bottom plate, and thus make a good joint to prevent the products of combustion from escaping into the air space between the concave and the movable part of the heater. It will be observed that the back of concave *a* is set at a little distance from the back of the chimney, so that the heat and products of combustion from the flue passage a^4 which pass through the concave by means of the collar near the bottom, as before stated, may pass up the chimney behind the concave, and thus make the concave a heating plate to heat the air passing in contact with its opposite side. In the base of the movable part of the heater is a receiving air chamber *f*, which may receive air from the room by holes, f^1, in the flaring base plate f^2, or air may be brought into the receiving chamber from below through holes, f^3, in the hearth or bottom plate. Some of the air from the receiving chamber passes through holes, g'', in the flaring base plate into the space between the concave *a* and the cylindrical jacket *h* of the movable part of the heater, and rises up into the distributing chamber *i*, from which hot-air pipe i^1 con-

ducts the heated air through the chimney i^2, shown broken off in the drawing, to the room or rooms above in the usual way. The air from the receiving chamber f also passes up through a set of upright air-heating tubes, j, in the rear of and partly surrounding the fire-pot, said tubes being secured on the two circular plates j^1 j^2, which form the top of the receiving chamber and the bottom of the distributing chamber, and which, together with the cylindrical jacket h, form the enclosure in which are situated the enclosed ash-pot k, the fire-pot m, and the lower part — central feeding funnel n. In order
74 to protect the lower part of the central feeding funnel from the fire, and also to obtain a circulation of air downwards from the top of the stove to the fire-pot to assist in burning the gases, I construct the central feeding funnel, with double walls, n^1 n^2, having sufficient room between them for a body of air, and communicating with the outside air by holes, n^3, at the top of the feeder, and with the fire-pot by holes at the bottom of the feeder, so that air will enter the top of the air space between the walls of the feeder and draw down to the fire-pot for the purpose of keeping the lower part of the feeder comparatively cool, protecting the coal in the feeder from combustion, and supplying air to burn the gases from the burning coal in the fire-pot. Fire-place heaters are necessarily of limited height, and to give room for a considerable supply of coal in the feeder I have carried it up above the top of the heater by placing on top of the heater a removable section, o, furnished with a cover, o^1, which is lifted off to put in coal. At and around the base of the removable section o is a flange, o^2, perforated with holes to match the holes in the feeding funnel, so that by turning the removable section the air passage down through the walls of the feeder may be closed wholly or partly as desired. In case the upper section, o, of the feeder should be made in one piece with the feeder, a registering plate perforated with similar holes may be used in place of the flange.

In order to heat the air which supports combustion in the fire-pot, I construct the fire-pot of double walls, or, in other words, I make the walls of the fire-pot m hollow, as shown in the drawings, and leave an opening, m^1, in front of the fire-pot through the outer wall of the same for air to enter from in front outside the heater through the door or register m^2. The air passes around the fire-pot between the walls, being heated thereby, and descends into the ash-pit through openings behind the grate, one of which, p, is
75 shown in the drawings, and thence up through the grate to the fire in the fire-pot. A portion of the air within the walls of the fire-pot escapes with the fire from apertures r, in the upper part of the inner wall of the fire-pot, to assist in burning the gases. The door k^1 to the ash-pit is to be kept closed, except when ashes, &c., are to be removed. A slide-register, k^2, is placed at the side of the ash-pit to be used, if desired, to draw the dust into the inner part of the heater when clearing out the fire.

In the lower part of the front of the fire-pot I make a clinker-cleaning opening, s, similar to that described in a former patent to me, approached by a passage, s^1, closed by a door, s^2, except when

desired to clean out the clinkers or slice the fire, but to more effectually close the said opening I have in this heater placed a lip, s^3, in the swiveling grate, provided with holes, s^4, so that a poker can be used to remove the lip from the passage by turning the grate around on its axis.

The course of the air to the fire-pot and the passage therefrom of the products of combustion is indicated by red arrows, and the course of the air to the receiving air chamber and its passage through the air-heating passages and chambers is indicated by blue arrows.

In base-burning stoves and heaters great trouble is sometimes experienced when the fire goes out, leaving the feeder full, or partly full, of coal; also when it is desired to clean out the fire above the grate and remove clinker and slate and other matters, or to introduce kindling below the coal in the grate. To remedy this difficulty I have devised means to hold up the coals in the fire-pot and feeder while kindling is being introduced below, or the clinkers, etc., are removed. For this purpose I have made a horizontal opening, *t*, in the fire-pot of sufficient width and height to introduce the slicer *u*, Fig. 5, by opening the door m^2, which is also of sufficient width for that purpose. The slicer *u*, which is a flat plate of metal
76 with a handle of nearly the width of the inner diameter of the fire-pot, being pushed horizontally through the coals in the fire-pot until it reaches the back of the same, will hold up the coals above it and prevent them from passing down to interfere with removing clinkers and unconsumed matter below through the clinker-cleaning passage, or by tipping the grate, and also holds up the coals above to permit of the introduction of kindling if desired. Although I prefer to put in the slicer below the top of the fire-pot, as described, yet if an opening be made of sufficient width to introduce a slicer above the fire-pot in such manner that it can pass under the feeder and hold up the coals therein when desired, it will be a great advantage.

Insert A, March 16, 1870.

Erase A, November 20, 1868.

I claim—

The double walled fire-pot in combination with the air passages, whereby air passes into and between its walls and is supplied to the fire part constituting the air supply or draft for combustion in the heater, substantially as described.

Treadwell & Hailes, May 7, 1863. Reissued Feb. 3, 1863. W. H. Goewey, May 26, 1863. W. B. Treadwell, May 3, 1864.

The double walled central feeder in combination with the fire-pot and heater, substantially as described.

J. C. Henderson, May 24, 1869; Nov. 17, 1865. Hunt. S. & B., May 5, 1868.

In combination with a fire-place heater, a central-feeder opening at the top or above the top of the heater, substantially as described.

The projection of the feeder above the top of the fire-place heater, substantially as described.

In a fire-place heater the upright air-heating tubes in the rear of and partly surrounding the fire-pot, in combination with the fire-pot, substantially as described.

R. Holmes, April 7, 1868, and is common in coal stoves.

Erase A, March 27, 1869.
J. Martens.
I. P. Deikerman, Aug. 4, '68.
See foot era. A, Nov. 20, 1868.
V. W. & McG., May 1, '66, Mar. 10, 1868.

The arrangement of an opening to introduce the slicer for holding up the coals when clearing out the fire, in combination with the fire-pot and feeder, substantially as described.

In a fire-place heater the arrangement of the outlet for products of combustion at the lower
77 part of the stationary concave whereby the concave becomes an air-heating plate when in operation, substantially as described.

This is but an ordinary mode of operating such devices.

In combination with the clinker-cleaning opening, the lip on the grate for opening and closing the same by turning the grate, substantially as described.

In combination with the stationary concave having the slightly conical collar or outlet passage, the slides or guides whereby the movable part is guided so that the exit funnel will enter and fit said outlet passage, substantially as described.

Insert A. Dec. 1, 1868.

JOHN M. THATCHER.

Witnesses:

F. C. TREADWELL, JR.,
WILLIAM McINTYRE.

U. S. PATENT OFFICE,
WASHINGTON, D. C., *May* 11, 1868.

Jno. M. Thatcher, care Francis C. Treadwell, Jr., 335 Broadway, New York.

SIR: Please find below the communication of the examiner in charge in the matter of your application for patent for fire-place heater, filed March 24, 1868.

Very respectfully,

——— ———,
Commissioner.

EXAMINER'S ROOM No. 100.

In the matter of the application above referred to the specification is herewith returned, and the applicant is requested to so amend it as to set forth clearly in what the nature of the invention consists. Attention is called to the requirements of the official rules. See sections 10, 11, and 14 of edition of Aug. 1, 1867.

L. DEANE, *Examiner.*

78 Application of JOHN M. THATCHER for imp's in fire-place heaters, pending.

335 BROADWAY, NEW YORK, 23*d May*, 1868.

Hon. Commissioner of Patents.

SIR: The communication of the examiner in charge of this application, dated May 11, 1868, returning the specification for amendment, has been received, and in reply I have to say that I do not

see how I can more clearly state in an amendment, as requested, in what the nature of the invention consists than it is already set forth in the specification.

The specification begins by stating that the applicant has invented certain new and useful "improvements in fire-place heaters," and that the following portions of the specification contain a full and correct description thereof, reference being had to the drawings by letters. Then follows a full description of the construction, operation, and objects of the improvements, concluding, as required by law, with a summary statement of the precise improvements made by the applicant, and which he claims as his invention.

If the description of the mode of construction, operation, and objects of the improvements specified as the invention is not understood by the examiner, and he will point out the parts he does not understand, I will be most happy to make the necessary explanations and corrections, should there be occasion for them.

I am aware that it is sometimes the practice with the agent who draws the specification to put the substance of each claim separately in a preamble, which is sometimes called a statement of the invention, but this is obviously mere surplusage and not required by law, and I cannot suppose the examiner desires such an amendment to be made.

The examiner will find upon looking into the specification that it is not a mere naked reference to the drawings by letters of
79 reference, but is a full and complete statement or description of the improvements and their objects, and is a sufficient and full compliance with requirement of the acts of Congress in such cases made and provided. The applicant is not required to make a dissertation or an argumentative specification, and should not be allowed to do so. All he is required to do is to describe his improved apparatus plainly and clearly and specify exactly what he claims as his invention.

Should the examiner not concur in my views I ask as a favor that he will not return the case to me here, but have it suspended until I visit the Patent Office, which will be in the course of the next fortnight.

Respectfully, F. C. TREADWELL, JR.,
Att'y for J. M. Thatcher.

Application of J. M. THATCHER for imp's in fire-place heaters.

WASHINGTON, *August* 15, 1868.

Hon. Commissioner of Patents.

SIR: I have called to see the examiner in charge of this application, and find him absent.

The applicant has also called, with the same result. As I have no opportunity to have a personal conference with the examiner, I respectfully request that he will act on the merits of the case, and present all his objections at once.

I make this request because I find in the file of the case memoranda which shows that the examiner is prepared to act on the

merits, and if the objections to the clauses of the claim are,
80 any of them, good it would involve rewriting and amending the "statement" he has called for.

Respectfully, F. C. TREADWELL,
Att'y for John M. Thatcher.

App. J. M. THATCHER for fire-place heater, pending.

335 BROADWAY, NEW YORK, 29 *Sept.*, 1868.

Hon. Comm'r of Patents.

SIR: Please forward to me the specification in this case for amendment. It was left by Mr. Thatcher with the examiner when he had personal conference.

Respectfully, F. C. TREADWELL, JR.,
Att'y for John M. Thatcher.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
WASHINGTON, D. C., *Oct.* 1, 1868.

SIR: Agreeably to your request of the 29th ult., the specification of your application for letters patent is herewith returned. Attention is called to the new official rule prohibiting the return of any papers filed in future application.

Yours respectfully, L. DEANE, *Examiner.*

$\frac{2\,2}{2\,0\,2}$.

Jno. M. Thatcher, care F. C. Treadwell, Jr., 335 Broadway, New York city.

81 U. S. PATENT OFFICE,
WASHINGTON, D. C., *Sept.* 5, 1868.

Jno. M. Thatcher, care Francis C. Treadwell, Jr., 335 Broadway, New York.

SIR: Please find below the decision of the examiner in charge in the matter of your application for patent for fire-place heater (base-burner), filed March 24, 1868.

Very respectfully, ——— ———,
Commissioner.

EXAMINER'S ROOM No. 100.

The application above referred to has been examined, although the request that the specification be so amended as to conform to the form prescribed by the office rules respecting the statement of the nature of the invention has not been complied with.

The 1st claim seems to have been anticipated in the base-burner of Treadwell & Hailes, patented May 7, 1861, and reissued Feb. 3, 1863; W. H. Goewey, May 26, 1863, and W. B. Treadwell, May 3, 1864. The 2nd claim in J. C. Henderson, pat. May 29, 1860, and Joel Tiffany, Dec. 17, 1867. The 3d and 4th shown, though not claimed in the pat., to Stuart & Bridge, May 5, 1868. The 5th is

substantially shown in the base-burner of Robert Holmes, April 7, 1868, and this arrangement of tubes is common in coal-stoves, whether used as fire-place heaters or set out in the middle of the apartment. The 6th is anticipated in patents to Geo. R. Moore (misc.), Feb. 5, 1856, and June 21, 1860; J. Martino (misc.), March 12, 1867, and T. P. Dickerman, base-burner, Aug. 4, 1868. The 7th is found in the base-burner of VanWormer & McGarvey, patented May 1, 1866, and March 10, 1868. The lip on the grate (8th
82 claim) is only an ordinary means for operating such devices.
The 9th claim, as at present advised, is not objected to. Specification herewith returned.

L. DEANE, *Examiner.*

App. JOHN M. THATCHER for fire-place heater.

Hon. Comm'r of Patents.

SIR: Herewith is amendment to my application, which I submit, and beg to be allowed to divide as per new application filed.

Yours, JOHN M. THATCHER,
P'r F. C. TREADWELL, JR.

(Interference cases.)

DEPARTMENT OF THE INTERIOR,
U. S. PATENT OFFICE,
WASHINGTON, D. C., *Nov.* 24, 1868.

SIR: Please find below a communication concerning your application for a patent for a fire-place heater filed the 24th day of March, 1868.

Very respectfully,

—— ——
Commissioner.

Jno. M. Thatcher, care Francis C. Treadwell, 335 Broadway, New York.

EXAMINER'S ROOM No. 100.

In the matter of the alleged invention above referred to
83 notice is hereby given to the parties hereinafter named that their claims are adjudged to interfere with each other, and that a hearing will be granted them on the third Monday of January, 1869, and that the testimony of the respective parties must be closed previous to the days hereinafter specifically designated, it being understood that the party first making the inventor's oath will be deemed the first inventor in the absence of proof to the contrary.

Rebutting testimony, but no other, may be taken after the closing of the testimony-in-chief, but the same must be closed previous to the second Monday of January, 1869.

All testimony must be taken, &c., in accordance with the printed rules.

Applicant.—John M. Thatcher, Francis C. Treadwell, 335 Broadway, New York, his attorney. His oath, March 17, 1868. His testimony will close on the fourth Monday of December, 1868.

Patentee.—T. P. Pickerman, Jno. E. Earle, New Haven, Conn., his attorney. Date of patent, August 4, 1868. His testimony will close on the first Monday of January, 1869.

L. DEANE, *Examiner.*

U. S. PATENT OFFICE,
WASHINGTON, D. C., *Nov.* 30, 1868.

Jno. M. Thatcher, care F. C. Treadwell, 335 Broadway, N. Y.

Please find below a communication from the examiner relating to your application for a patent for fire-place heater, filed March 24, 1868, and in interference with patent of T. P. Dickerman.

Very respectfully,

——— ———
Commissioner.

84 EXAMINER'S ROOM No. 100.

In the matter above referred to the notice of interference is so modified as to change the time of taking testimony as follows: Thatcher's testimony will close on first Monday of January, 1869, and Dickerman's testimony will close on the fourth Monday of December, 1868.

$\frac{2\,2}{2\,0\,2}$ I.

L. DEANE, *Examiner.*

Amendment.

A. December 1, 1868.

I hereby amend my specification of fire-place heater, division A, by adding the following claim:

"Extending the central feeder above the top of the fire-place heater for the purpose of giving an additional capacity to the feeder for holding coal, substantially as described."

Dec. 1, 1868.

JOHM M. THATCHER,
By F. C. TREADWELL, JR., *Att'y.*

Amendment.

A. November 20, 1868.

I hereby amend my application for fire-place heater, filed March 20th, 1868, by striking out all the claims except the sixth claim.

JOHN M. THATCHER,
By F. C. TREADWELL, *Att'y.*

85 Interference between JNO. M. THATCHER and T. P. DICKERMAN'S patent, improvements in stoves, heaters, &c.

335 BROADWAY, NEW YORK, *Jan'y* 12, 1869.

Hon. Elisha Foote, Commissioner of Patents.

SIR: On the part of the application of John M. Thatcher in interference as above, I have to say that we have received no notice of the taking of any testimony in behalf of the Dickerman patent, and have no knowledge that any has been taken; therefore we have

not considered it necessary to take testimony in behalf of the Thatcher application, it having been sworn to and filed before the Dickerman application and overlooked by inadvertence when Dickerman's patent was granted.

A decision in favor of Thatcher's application follows as a matter of course under the circumstances of the case and the rules of the office.

Respectfully, JOHN M. THATCHER,
By F. C. TREADWELL, JR., *City.*

DEPARTMENT OF THE INTERIOR,
U. S. PATENT OFFICE,
WASHINGTON, D. C., *Jan.* 22, 1869.

SIR: You are hereby informed that in the case of interference between your claims and those of T. Parsons Dickerman in his patent No. 80712 for base-burning stove, upon which a hearing was appointed for the 3d Monday in January, 1869, the question of priority of invention has been decided in your favor.

86 An appeal may be taken from this decision within 30 days. See sections 2 and 3 of the act of March 2, 1861.

Copies of the decision will be furnished at the usual rates.

Yours, respectfully, L. DEANE, *Examiner.*

$\frac{22}{202}$ II.

To Jno. M. Thatcher, care Francis C. Treadwell, Jr., 335 Broadway, New York.

In the Matter of the Application of JOHN M. THATCHER for improvements in fire-place heaters, pending.

335 BROADWAY, NEW YORK, *March* 8, 1869.

Hon. Commissioner of Patents.

SIR: The examiner will recollect that this application was divided and a part issued on the 22nd of December last, leaving one claim (for the slicer to hold up the coal in the reservoir) in interference with Dickerman, and another claim which it was thought by the examiner would have to be put in interference with some application for a reissue expected to be made.

The interference with Dickerman has been decided in Thatcher's favor, and the time for appeal has expired.

Mr. Thatcher wishes to have his patent issued without unnecessary delay, and the object of this letter is to enquire whether the examiner still objects to the issue of the patent with both claims; and, if so, whether he will accept of an amendment making another division of the application which will include the subject-matter of the claim in interference with Dickerman to issue now, leaving the other claim in the original application to be disposed of hereafter.

87 Inasmuch as this application was filed before the first of October last, I am entitled under the rule of the office to have the specification and amendment returned to me for

amendment, and I will be obliged if the examiner will return them to me, in order that I may make the necessary amendments correctly in case he approves of a further division of the application.

Respectfully, F. C. TREADWELL, JR.,
Att'y for J. M. Thatcher.

U. S. PATENT OFFICE,
WASHINGTON, D. C., *March* 10, 1869.

John M. Thatcher, care of F. C. Treadwell, 335 Broadway, New York:

Please find below a communication from the examiner relating to your application of M'ch 24, 1868, for fire-place heater.

Very respectfully, ——— ———,
Commissioner.

EXAMINER'S ROOM, No. 100.

In the matter above referred to the application has been suspended on account of the second claim covering the extension top. This feature is found in other cases now pending. If this claim should be erased the application would probably pass the issue.

The specification and amendment of Nov. 20, 1868, are herewith returned in accordance with applicant's request.

L. DEAN, *Examiner.*

Amendment.

I hereby request permission to further divide my applica-
88 tion for improvements in fire-place heaters, filed about March 24, 1868, by striking out the sixth original claim and incorporating the substance thereof in a separate application, and respectfully submit the following amendment to said original specification:

A. March 27, 1869.

I hereby amend my application for improvement in fire-place heaters, filed about March, 24, 1868, by striking out the sixth original claim.

JOHN M. THATCHER,
By F. C. TREADWELL, JR., *Att'y.*

App. JOHN M. THATCHER, impt's in fire-place heaters, pending.

335 BROADWAY, NEW YORK, *March* 26, 1869.

Hon. Comm'r of Patents.

SIR: I herewith return the original specification and amendment A, together with a new amendment striking out the sixth claim, and incorporating it in a separate division of the application, which I also transmit by this mail.

The claim upon which the application is suspended will thus be left subject to the further action of the office without prejudice to the immediate enjoyment by the applicant of his rights, determined by the decision of the interference case with Dickerman.

Respectfully, F. C. TREADWELL, JR.,
Att'y for J. M. Thatcher.

In the Matter of the application of JOHN M. THATCHER for imp. in fire-place heaters, filed March 24, 1868.

335 BROADWAY NEW YORK, *Feb.* 14, 1870.

Hon. Comm'r of Patents.

89 SIR: I will be obliged if the examiner will act upon the remaining claim of this application so that it can be disposed of by an interference if necessary. The examiner will recall that he thought that some patents that had been inadvertently granted upon applications of a subsequent date would be applied for reissue, and that the claim would interfere, etc.

Respectfully, F. C. TREADWELL.

Please file instead of letter to same party dated March 11, 1870.

U. S. PATENT OFFICE,
WASHINGTON, D. C., *March* 12, 1870.

Jno. M. Thatcher, care F. C. Treadwell, Jr., No. 335 Broadway, New York:

Please find below a communication from examiner concerning your application for a patent for a base-burning fire-place heater, filed March 24, 1868.

Very respectfully,

—— ——.
Commissioner.

EXAMINER'S ROOM No. 100.

The present application will need so many amendments to make it conform to the special feature of the extension top feed that the applicant is requested to rewrite the specification limiting it to this invention.

If, as he suggested yesterday in conversation with the examiner, he desires to claim broadly the front top feed in fire-place heaters he had also best include that specialty in his amendment. But touching this latter point, as an interference embracing this invention is now ready to be declared between several other patents and applications, he is requested to signify his wishes with-

90 out any delay; otherwise the office will take his silence as a token of declination of action.

$\frac{2\,2}{2\,0\,2}$ L. L. DEANE, *Examiner.*

Amendment.

A. March 16, 1870.

U. S. PATENT OFFICE,
WASHINGTON, D. C., *March 15th*, 1870.

I hereby amend my application for letters patent for improvement in fire-place heaters, filed March 24th, 1868, by adding the following claim:

"The top feed magazine applied to a fire-place heater, substantially as described."

JOHN M. THATCHER,
By F. C. TREADWELL, JR., *Att'y.*

Amendment.

Application of JOHN M. THATCHER for letters patent for improvements in fire-place heaters, filed March 24, 1868.

I hereby amend my applications by substituting for the original specification and claims and the amendments the following specification and claims, viz:

Specification.

A. March 28, 1870. Erase and insert A., May 31, 1870.

To all whom it may concern:

Be it known that I, John M. Thatcher, of Bergen, in the county of Hudson and State of New Jersey, have invented certain new and useful improvements in fire-place heaters, and I do hereby
91 declare that the following is a full and correct description thereof, reference being had to the accompanying drawings and to the letters of reference thereon:

Fig. 1 of the drawings is a front view of my improved fire-place heater as set in a fire-place; Fig. 2, a longitudinal section; Fig. 3, horizontal section; Fig. 4, a plan view with mantel and chimney broken away; Fig. 5, view of the "slicer" or plate to be introduced into the fire-pot under the "feeder" to hold up the coal that is unconsumed when the clinker and ashes, &c., in lower part of grate are to be removed; Fig. 6, plan view of grate; Fig. 7, front view of grate.

The fire-place heater is a modern heating apparatus adapted to be located in the fire-place of a sitting room underneath the mantel in place of the ordinary grate setting, for the purpose of heating the room in which it is placed and also to heat the rooms above it by heated air supplied from it through the walls or chimneys stacks in the manner of a hot-air furnace.

Owing to the peculiar location of the fire-place heater in the chimney place of a sitting room and to the necessity of confining it within reasonable dimensions and of making it an ornamental feature in the room, so that it can be used in place of the ordinary grate setting, especial adaptation of devices or combination of devices are required to embody principles that have been recognized as important and developed in coal-burning and air-heating stoves and furnaces.

The first part of my invention consists in a combination and arrangement of a vertical central feeder placed centrally over the fire-pot and extending vertically upward through the combustion chamber and hot-air chamber to the top of the fire-place heater opening through the same vertically, so that coals may be filled within the feeder to the top of the fire-place heater, thereby giving
92 the feeder the full capacity in height of the fire-place heater for holding coal. I prefer to make the feeder within the heater with double walls, the double walls extending from the lower part of the feeder to the top of the heater, and serving as a

passage-way for a current of air admitted through suitable apertures at the top of the heater to pass downwards to the lower part of the feeder for the purpose of cooling the lower part of the feeder and of aiding combustion.

The second part of my invention consists in extending the feeder above the top of the heater. The front of a fire-place heater which projects out from the fire-place beneath the mantel-piece is necessarily limited in height, and therefore affords but a limited space in height above the fire-pot for a central feeder, and I have sought to improve the fire-place heater in this respect by carrying up the central feeder in an ornamental form above the fire-place heater to such a distance as would not interfere with the line of sight, to the shelf of the mantel-piece, of a person sitting in the room; and this may be done either by a separate additional cylinder fitted to the top of the feeder, or by extending the casting of the top of the heater upward in a cylindrical form, or by extending upward the inner wall of the feeder.

But in order to more particularly describe my invention I will refer to the drawings which represent the above-mentioned improvements and some others, which are the subject of another separate specification.

My improved fire-place heater is made in two parts, the part *a* being a stationary concave, fitted to and set in the fire-place *b* below the mantel *c*, and having a face or front plate, *d*, like a grate front, but made to fit the contour of the movable part *e*, which slides in and out of the stationary concave *a*, upon slides a^1, attached to the bottom plate a^2 of the stationary concave, which are fitted to ways on the bottom of the movable part of the heater.

When the heater is not required to be used the movable part may be removed and a summer piece put in to close up the opening in front of the stationary concave, giving it the appearance of a grate front with the summer piece in.

93 The object of the slides is to guide the movable part when it is being pushed into the stationary part so that the short funnel or draught outlet a^4, for products of combustion, will enter and pass into the short, slightly conical collar a^5, which projects inwards from the back of the concave *a*, near the bottom plate, and thus makes a good joint to prevent the products of combustion from escaping into the air space between the concaves and the movable part of the heater.

It will be observed that the back of the concave *a* is set at a little distance from the back of the chimney, so that the heat and products of combustion from the flue-passage a^4, which pass through the concave by means of the collar near the bottom, as before stated, may pass up the chimney behind the concave, and thus make the concave a heating plate to heat the air passing in contact with its opposite side.

In the base of the movable part of the heater is a receiving air chamber, *f*, which may receive air from the room by holes f^1, in the flaring base plate f^2, or air may be brought into the receiving chamber from below through holes f^3, in the hearth or bottom plate.

Some of the air from the receiving chamber passes through holes g in the flaring base plate into the space between the concave a and the cylindrical jacket b of the movable part of the heater, and rises up into the distributing chamber i, from which a hot-air pipe, i^1, conducts the heated air through the chimney i^2, shown broken off in the drawing, to the room or rooms above in the usual way. The air from the receiving chamber f also passes up through a set of upright air-heating tubes, j, in the rear of and partly surrounding the fire-pot, said tubes being secured on the two circular plates j^1 j^2, which form the top of the receiving chamber and the bottom of the distributing chamber, and which, together with the cylindrical jacket b, form the inclosure in which are situated the enclosed ash-pit K, the fire-pot m, and the lower central feeding funnel n. In order to protect the lower part of the central feeding funnel from the
94 fire, and also to obtain a circulation of air downward from the top of the stove to the fire-pot to assist in burning the gases, I construct the central feeding funnel with double walls n^1 n^2, having sufficient room between them for a body of air, and communicating with the outside air by holes n^3 at the top of the feeder and with the fire-pot by holes at the bottom of the feeder, so that the air will enter the top of the air space between the walls of the feeder and draw down to the fire-pot, for the purpose of keeping the lower part of the feeder comparatively cool, protecting the coal in the feeder from combustion, and supplying air to burn the gases from the burning coal in the fire-pot.

Fire-place heaters are necessarily of a limited height, and to give room for a considerable supply of coal in the feeder I have carried it up above the top of the heater by placing on top of the heater a removable section, o, furnished with a cover, o^1, which is lifted off to put in coal.

At and around the base of the removable section o is a flange, o^2, perforated with holes to match the holes in the feeding funnel, so that by turning the removable section the air passage down through the walls of the feeder may be closed wholly or partly, as desired.

In case the upper section o of the feeder should be made in one piece with the feeder a registering plate, perforated with similar holes, may be used in place of the flange.

The drawings represent other improvements in fire-place heaters, which are also of my invention, but which it is not necessary to describe in detail, as they are the subjects of separate patents.

I claim—

First. In combination with a fire-place heater a central feeder extending to and opening through the top of the heater, substantially as described.

Second. In combination with the fire-place heater a central feeder projection above the top of the heater, substantially as described.

JOHN M. THATCHER,
By F. C. TREADWELL, JR.,
His Att'y.

Exd.: C. C. W., F. F.

95 App. J. M. THATCHER for imp. in fire-place heaters.

335 BROADWAY, NEW YORK, *26th March*, 1870.

Hon. Commissioner of Patents.

SIR: Upon looking into the matter at home, I find that the amendment, which I hastily prepared in Washington, does not sufficiently express the invention sought to be claimed by Mr. Thatcher, and I have, therefore, with as much dispatch as possible, prepared the enclosed, which I think more properly expresses it, and request that it be filed in the case.

F. C. TREADWELL, JR.,
Att'y for J. M. Thatcher.

I hereby amend my application for improvement in fire-place heaters by substituting for and in place of the present amended specification and claims the following specification and claims:

A. March 23, 1870. Erase and insert March 28, 1870.

To all whom it may concern:

Be it known that I, John M. Thatcher, of Bergen, in the county of Hudson and State of New Jersey, have invented certain new and useful improvements in fire-place heaters, and I do hereby declare that the following is a full and correct description thereof, reference being had to the accompanying drawings and to the letters of reference thereon:

Fig. 1 of the drawings is a front view of my improved fire-place heater as set in a fire-place; Fig. 2, a longitudinal section; Fig. 3, a horizontal section; Fig. 4, a plan view, with mantel and chimney broken away; Fig. 5, view of the slicer used to support the
96 fire while the clinkers are being removed; Figs. 6 and 7, plan and front views of the grate.

The first part of this invention consists in combining with a fire-place heater a central feeder, opening at the top of the heater, substantially as hereinafter described.

The second part of this invention consists in extending the central feeder above the top of the feeder, substantially as hereinafter described.

My improved fire-place heater is made in two parts, the part *a* being a stationary concave, fitted to and set in the fire-place *b* below the mantel *c* and having a face or front plate, *d*, like a grate front, but made to fit the movable part *e*, which slides in and out of the stationary cave upon slides, a^1, attached to the bottom plate a^2 of the stationary concave. The movable part *e* of the heater is the front part and projects out from the fire-place underneath the mantel, containing the fire-pot *m* and the central feeding funnel or magazine *n*, which extends upwards to and through the top of the heater. I prefer to make this feeder with double walls, n^1 n^2, but do not wish to limit this invention thereto, as this feature forms the subject-matter of another separate specification.

The front part of the heater being necessarily limited in height and affording but limited space in height above the coal in the fire-pot for the central feeder, I have provided for an extension of the central feeder upwards above the top of the heater by placing a removable section, *o*, on top of the central feeder, fitted to it as shown in the drawings and provided with a cover, o^1. This upper section may be cast with a central feeder or with the top plate of the heater, the object being simply to increase the capacity of the feeder.

The drawings represent other improvements in fire-place heaters, which are also of my invention, but which it is not necessary to describe in detail, as they are subjects of separate patents.

97 I claim—

First. In combination with a fire-place heater a central feeder opening through the top of the heater, substantially as described.

Second. In combination with a fire-place heater a central feeder projecting above the top of the heater, substantially as described.

JOHN M. THATCHER,
By F. C. TREADWELL, JR., *Att'y.*

(Interference cases.)

DEPARTMENT OF THE INTERIOR,
U. S. PATENT OFFICE,
WASHINGTON, D. C., *March* 29, 1870.

SIR: Please find below a communication concerning your patent and application filed as hereinafter stated.

Very respectfully, JNO. M. THATCHER,
Commissioner.

To John Thatcher, care F. C. Treadwell, Jr., 335 Broadway, N. Y.

EXAMINER'S ROOM No. 100.

In the matter of the alleged invention above referred to notice is hereby given to the parties hereinafter named that their claims are adjudged to interfere with each other, and that a hearing will be granted them on the 2d Tuesday of August, 1868, and that the testimony of the respective parties must be closed previous to the days hereinafter specifically designated, it being understood that the party first making application will be deemed the first inventor, in the absence of proof to the contrary.

98 Rebutting testimony, but no other, may be taken after the closing of the testimony-in-chief, but the same must be closed previous to the 1st Tuesday of August, 1870.

All testimony must be taken, &c., in accordance with the printed rules herewith transmitted.

David Stuart [and] Richard Peterson, assignees of D. Stuart & L. Bridge, of Philadelphia, Penn.; Howson & Son, Washington, D. C., their attorneys. Application filed Mar. 14, 1868; patented June 23, 1868; reissued Aug. 17, 1869. Their stove has the top feed which is shown in the stoves of all the parties to this interference; also the

magazine, having a circulation space around it and a gas-escape passage above it, as claimed in the 6th claim of Burrows and shown in the stoves of Sexton, Martine, Rob't Bibb & Klotz, and Philip Klotz. Their testimony will close on the 4th Tuesday of July, 1870.

Jno. M. Thatcher, of Bergen, Hudson Co., New Jersey; F. C. Treadwell, Jr., 335 Broadway, New York, his attorney. First application filed Mar. 24, 1868; 2d application filed Nov. 16, 1868; patented Dec. 22, 1868; 3d application filed Mar. 27, 1869; patented June 15, 1869. His first claim is for the top feed which is shown in the stoves of all the parties to this interference. His testimony will close on the 3d Tuesday of July, 1870.

Abraham H. Sanders, of Brooklyn, New York; Lemuel W. Serrell, New York, his attorney. Application filed Ap'l 16, 1858; patented July 14, 1868. His stove has the top feed which is shown in the stoves of all the parties to this interference. It has also the magazine, with the circulation space around it, and with the top of the magazine forming a part of the top of the stove, as claimed in the 5th claim of Burrows and shown in the stoves of Bibb, 94, 320, and 94700, and Martine. His testimony will close on the 2nd Tuesday of July, 1870.

David Stuart and Lewis Bridge, Philadelphia, Pa.; Howson & Son, Washington, D. C., their attorneys. Application filed Feb. 24, 1869; patented June 1, 1869. Their stove has the top feed
99 which is shown in the stoves of all the parties to this interference. Their testimony will close on the 1st Tuesday of July, 1870.

Bently C. Bibb, of Baltimore, Md.; Mason, Fenwick & Lawrence, Washington, D. C., his attorneys (his patents Nos. 99525, 92781, 94320, 94700, 97026, and 97956). First application, Bibb & Klotz, filed March 22, 1869; patented Feb. 8, 1870; 2nd, B. C. Bibb, filed June 19, 1869; patented July 20, 1869; 3rd, P. Klotz, filed July 30, 1869; patented Aug. 31, 1869; 4th, B. C. Bibb, filed Aug. 16, 1869; patented Sept. 14, 1869; 5th, B. C. Bibb, filed Oct. 25, 1869; patented Nov. 23, 1869; 6th, John J. Myers, filed Nov. 13, 1869; patented Dec. 14, 1869. His stoves all have the top feed, and those in his patents 94320 & 94700 show the circulation space around the magazine, the top of which forms a portion of the top of the stove, as shown in the stoves of Sanders, Martine, & Burrows and claimed in the 5th claim of Burrows' application. Some of his stoves show also the magazine having a circulation space around it and a gas-escape passage above it, as shown in the stoves of Stuart and Peterson, Sexton, Klotz, Bibb and Klotz, Martine and Burrows, and claimed in the 6th claim of Burrows. His testimony will close on the 4th Tuesday of June, 1870.

Sam'l B. Sexton, of Baltimore, Md.; Knight Bros., Washington, D. C., his attorneys. First application filed May 25, 1869; patented Sept. 28, 1869—95274; 2nd application filed Nov. 23, 1869; patented Dec. 14, 1869—97970. His stoves show the top feed and also the magazine having a circulation space around it and a gas-escape above it, as shown in the stoves of Bibb, Bibb & Klotz, Philip Klotz,

Martine, Stuart & Peterson, and Burrows, and claimed in the 6th claim of Burrows. His testimony will close on the 3d Tuesday of June, 1870.

B. C. Bibb and P. Klotz, of Baltimore, Md.; Mason, Fenwick & Lawrence, Washington, D. C., their attorneys. Application filed Oct. 26, 1869; patented Nov. 23, 1869—97029. Their stove has the top feed and also the magazine having a circulation space around
100 it and a gas-escape passage above it, as shown in the stoves of Bibb, Klotz, Sexton, Martine, Stuart, Peterson, and Burrows, and claimed in the 6th claim of Burrows. Their testimony will close the 2nd Tuesday of June, 1870.

Philip Klotz, of Baltimore, Md.; Mason, Fenwick & Lawrence, Washington, D. C., his attorneys. Application filed Oct. 26, 1869; patented Nov. 23, 1869, No. 97094. His stove has the top feed and the magazine *having* a circulation space around it and a gas-escape passage above it, as shown in stoves of Bibb, Bibb & Klotz, Sexton, Martine, Stuart and Peterson, and Burrows, and claimed in the 6th claim of Burrows. His testimony will close on the 1st Tuesday of June, 1870.

William Burrows, of Brooklyn, New York; Mason, Fenwick & Lawrence, Washington, D. C., his attorneys. Application filed Dec. 4, 1869. His third claim is for the top feed in the fire-place fuel, magazine stove, and this is shown in the stoves of all the parties to this interference. His fifth claim covers what is shown in the stoves of Jno. Martine, patent No. 100,539; B. C. Bibb, No. 94700 and 94539, and A. K. Sander. His sixth claim embraces what is shown in the stoves of Stuart & Peterson, Sexton, Martine & Bibb, & Klotz & Klotz. This interference is declared at the request of this applicant, but his first, second, fourth, and seventh claims, for the screen over the top feed, are not now placed in interference, because two parties who claim that feature are already in interference. On the decision of that interference all the parties to this interference whose devices have the screen will be placed in interference with the successful party. This applicant's testimony will close on the 5th Tuesday of May, 1870.

Jno. Martine, of Philadelphia, Penn. His first application filed Jan. 4, 1870; patented March 8, 1870; Mason, Fenwick & Lawrence, Washington, D. C., his attorneys. Second application filed Feb. 5, 1870; Howson & Son, Washington, D. C., his attorneys. Both his stoves show the top feed, and one of them has the parts shown in stoves of B. C. Bibbs, Nos. 94320 and 94700, A. K.
101 Sanders, and Wm. Burrows, and claimed in the fifth claim of Burrows. It also has the circulation space and gas-escape passage, as shown in the stoves of Sexton, Bibb, Bibb & Klotz, Stuart & Peterson, & Burrows, and claimed in the sixth claim of Burrows. His testimony will close on the 4th Tuesday of May, 1870.

L. DEANE, *Examiner.*

No. 1. U. S. PATENT OFFICE,
WASHINGTON, D. C., *April* 19, 1870.

Jno. M. Thatcher, care F. C. Treadwell, Jr., 335 Broadway, New York:

Please find below a communication from the examiner concerning your interference with Burrows *et al.*, declared March 29, 1870.

Very respectfully,

——— ———,
Commissioner.

EXAMINER'S ROOM No. 100.

The parties to this interference are notified that under the enumeration of the cases of B. C. Bibb his application, case A, filed Mar. 22, 1869, is included.

L. DEANE, *Examiner.*

No. 1. U. S. PATENT OFFICE,
WASHINGTON, D. C., *April* 20, 1870.

Jno. M. Thatcher, care F. C. Treadwell, Jr., 335 Broadway New York:

102 Please find below a communication from the examiner concerning your interference, declared March 29th, 1870, with Burrows, *et. al.*

Very respectfully,

——— ———,
Commissioner.

EXAMINER'S ROOM No. 100.

The application of Stuart & Peterson, filed July 27, 1869, for a reissue of their patent, No. 79275, of June 23, 1868, is included in the interference.

L. DEANE, *Examiner.*

In the Matter of the Application of J. M. THATCHER for letters patent for improvement in stoves.

Hon. Commissioner of Patents.

SIR: I hereby constitute and appoint Henry Howson & Son, of Philadelphia, my true and lawful attorneys, in conjunction with F. C. Treadwell, in the matter of my above application, and authorize them to alter and amend the specification and drawings, should they deem it advisable, and to take such other steps as they may consider expedient in prosecuting my said application.

Very respectfully yours,

J. M. THATCHER.

Signed at Washington this 20th day of May, A. D. 1870.

In the Matter of the Application of J. M. THATCHER for
103 letters patent for improvement in fire-place heaters.

HOWSON'S PATENT AGENCY, *May* 28th, 1878.

To the Hon. Commissioner of Patents.

SIR: I hereby cancel all specifications heretofore filed in the above case, excepting such part of the first specification as contains the petition, oath, and power of attorney with signature of applicant and witnesses, and in place of the same substitute the following:

A. May 31, 1870.

To all whom it may concern:

Be it known that I, John M. Thatcher, of Jersey City, Hudson County, New Jersey, have invented certain new and useful improvements in fire-place heaters, and I do hereby declare the following to be a full, clear and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

Nature and object of the invention.

My invention consists, first, of a base-burning fire-place stove, in which are combined the following elements, namely, a cylinder or body projecting outwards from the mantel or frame, a fuel magazine or feeder within the said cylinder, and an opening through which the said magazine can be fed from above. The object of this part of my invention is to increase the capacity of the fuel magazine.

Secondly. Of a base-burning fire-place stove or heater in which the magazine or feeder is extended to the feed opening of the outer casing, so that there may be no open space across which to project the fuel on feeding the magazine.

104 Thirdly. In the combination with a fire-place stove or heater, of a feeder or magazine projecting above the top of the heater, so as to increase the capacity of the said magazine.

Description of the accompanying drawings.

Fig. 1, is a front view of my improved fire-place heater; Fig. 2, a vertical section of the same; Fig. 3, a sectional plan; Fig. 4, a plan view with part of the mantel removed; Fig. 5, a view of the "slicer" or plate to be introduced into the fire-pot under the "feeder," for the purpose of holding up the coal which is unconsumed, when the clinkers, ashes, &c., in the lower part of the fire-place have to be removed; Fig. 6, is a plan view of the grate; and Fig. 7, an edge view of the grate.

General description.

My improved fire-place heater is made in two parts, the part *a*, being a stationary concave fitted to and set in the fire-place *b*, below the mantel *c*, and having a front plate or frame, *d*, similar to that

of an ordinary grate, and adapted to the shape of the movable part of the heater or stove, the latter being arranged to slide in and out of the stationary concave a, upon guides, a^1, attached to the bottom plate a^2 of the stationary concave.

When the heater is not required to be used the movable part may be withdrawn from the fire-place, and a summer piece so fitted to the latter as to close the opening in front of the stationary concave.

The object of the guide is to so direct the movable part
105 when it is pushed into the stationary part that the short funnel or outlet a^4 for the products of combustion will pass into the short, slightly conical collar a^5, which projects inwards from the concave a, near the bottom plate. A good joint is thus produced, and the leakage of products of combustion into the air space between the concave and the movable part of the heater is prevented.

It will be observed that the back of the concave a is set at a little distance from the back of the chimneys, so that the heat and products of combustion from the flue passage a^4, which pass through the concave, as before described, may pass up the chimney behind the concave, and thus make the concave a heating plate for the air which passes in contact with its opposite side.

In the base of the movable part of the heater is an air chamber, f, which may receive air from the room by holes, f^1, in the flaring base plate f^2, or air may be brought into the chamber from below, through holes in the hearth or bottom plate.

Some of the air from this chamber f passes through holes, g, of the flaring base plate into the space between the concave a and the cylindrical jacket h of the movable part of the heater, and rises up into the distributing chamber i, from which a hot-air pipe, i^1, conducts the heated air through the chimney i^2, shown broken off in the drawings, to the room or rooms above in the usual way.

The air from the receiving chamber f also passes up through a set of vertical air-heating tubes, j, at the rear of and partly surrounding the fire-pot, said tubes being secured on the two circular plates j^1 j^2, which form the top of the receiving chamber and the bottom of the distributing chamber, and which, together with the cylindrical jacket h, form the inclosure in which are situated the inclosed ash-pit, k, the fire-pot, m, and the lower portion of the feeder or magazine n.

In order to protect the lower part of the feeder or magazine from the fire, and also to obtain a circulation of air downwards from the top of the floor to the fire-pot, to assist in burning the gases,
106 I, in the present instance, construct the magazine with double walls, n^1 n^2, having sufficient room between them for a body of air, and communicating with the outside air by holes, n^3, at the top of the feeder, and with the fire-pot by holes at the bottom of the feeder, so that air shall enter at the top of the air space between the walls of the magazine and pass down to the fire-pot for the purpose of keeping the lower part of the feeder comparatively cool, protecting the coal in the feeder from combustion, and supplying air to burn the gases from the burning coal in the fire-pot.

A more minute description of my improved heater than that

given above will be unnecessary, as several of the parts described and illustrated in the drawings form the subjects of other patents, and my present improvements relate especially to the top-feeding arrangement of a fire-place stove or heater. I will now refer more particularly to these improvements.

In constructing my improved heater I have so combined three elements or features as to produce an important result. These features are as follows: First, a cylinder or body of the heater projecting outwards from the frame or mantel; second, a feeder or fuel magazine within the cylinder, and, thirdly, an opening through which the said magazine can be fed from above.

While fire-place stoves or heaters with protuberant cylinders and feeders or magazines were known prior to the date of my invention, I am not aware that the above combination of three features above referred to, namely, a top-feeding arrangement, a protuberant cylinder permitting such an arrangement, and a magazine within the cylinder, has ever been known or used prior to my invention of the same.

It has been the practice to so construct base-burning fire-place stoves or heaters that the fuel had to be introduced into the feeder or magazine through a doorway in front; hence, the magazine was of a very limited capacity. By so arranging the feed-hole, however, that the fuel can be introduced into the magazine from above,
107 the capacity of the magazine is increased, a result which I especially aimed at in adopting the first part of my invention, namely, the above-mentioned combination, and in the production of my "top-feeding, base-burning fire-place stove."

The second part of my invention consists in extending the feeder or magazine to the feed-hole of fire-place stoves. This not only increases the capacity of the magazine to some extent, but an uninterrupted passage or guide is afforded for the introduction of fuel into the magazine through the opening in the outer casing.

The capacity of the magazine is still further increased in the present instance by carrying the feeder up above the top of the heater, by placing thereon a movable section, *o*, furnished with a cover, *o'*, which has to be lifted off when coal has to be introduced into the magazine.

At and around the base of this removable section *o* is a flange, o^2, perforated with holes to match the holes in the feeder or magazine, so that by turning the removable section the air passage through the walls of the feeder may be closed, wholly or partially, as desired.

In case the upper section *o* of the feeder should be made in one piece with the feeder, a registering plate perforated with similar holes may be used in place of the flange.

Claims.

First. A base-burning fire-place stove in which are combined the following elements, namely, a cylinder or body projecting outwards from the mantel or frame, a fuel magazine or feeder within the cylinder, and an opening through which the said magazine can be fed from above.

Second. A fire-place stove or heater in which the magazine is extended to the feed opening of the outer casing.

108 Third. In combination with a fire-place heater a feeder or magazine projecting above the top of the heater, substantially as described.

Very respectfully yours,

H. HOWSON,
One of the Attorneys for J. M. Thatcher.

Memorandum of Fee Paid at U. S. Patent Office.

Mail, $20.
Inventor, J. M. Thatcher.
Invention, fire-place stove.
Date of payment, June 3, 1870.
Fee, $20.
Solicitor, Howson & Son.

The specialties in this case are the front top feed in a fire-place heater, the fuel magazine extending to the feed opening in the outer casing, and the magazine when it extends above the top of the heater, all as set out in the description of the nature of the invention and in the three claims.

$\frac{22}{202}$. 1868.

No. 104,376.

John M. Thatcher, of Bergen, county of Hudson, State of New Jersey.

Fire-place heaters.
March 17, 1868.
Received Mar. 24, 1868.

Petition, Mar. 24, 1868.
109 Affidavit, " " "
Specification, " " "

Drawing, Mar. 24, 1868.
Model, " " "
Cert. dep., " " "
1. Cash, $15, Mar. 24, 1868.
Add'l fee cert.
1. " " cash, $20, June 3, 1870.

Examined, Deane, June 2, 1870.
2. Issue, Grinnell, June 3, 1870.
3. Patented, June 14, 1870.
Recorded, vol. —, page —.
Circular, June 3, 1870.
Francis C. Treadwell, Jr., associate, 335 Broadway, New York.
H. Howson & Son, Philadelphia, Pa., 1868.

1688.

Letter, spec. ret. May 11, 1868.
Letter, spec., Sept. 5, 1868.
Letter, spec. ret. Oct. 1, 1868.
Int'f., notice, Nov. 24, 1868.
Letter, Nov. 30, 1868.
K'g far., Jan. 22, 1869.
Letter, M'ch 10, 1869.
Letter, M'ch 12, 1870.
Int'f., M'ch 29, 1870.
Letter, April 19, 1870.
Letter, April 20, 1870.

110 RAYMOND SALT, a witness produced on the part of the complainants, being duly sworn, deposes and says:

Q. 1. What is your name, age, residence, and occupation?

A. Raymond Salt: I am 48 years of age; I reside at 292 East 119 street, N. Y.; and I am a tinsmith; and I am in the employ of J. M. Thatcher.

Q. 2. How long have you been in the employ of J. M. Thatcher, or of the firm or company of which he has been a member or manager?

A. I have been in Mr. Thatcher's employ twelve years this coming April, 1879.

Q. 3. Do you remember a model for a fire-place heater constructed like the drawing of Thatcher's fire-place heater, patent No. 104,376, which drawing is now shown you? And, if yea, state when you first saw such model.

A. I do. I first saw it in May, 1867.

Q. 4. Was it then completed?

A. It was.

Q. 5. Between the time that you came to Thatcher & Haviland's and the time when you first saw this model was any work done on it by any one in the shop of Thatcher & Haviland?

A. No, sir.

Q. 6. Did you afterward see a fire-place heater constructed like that model operated with a fire in it? And, if yea, state when and where first.

A. I saw it at 602 Broadway in the fall of 1867.

Q. 7. During what part of the fall of 1867?

A. Before the cold weather set in.

RAYMOND SALT.

Sworn to before me this March 3, 1879.

———

Examiner, &c.

Adjourned to Tuesday, March 4, 1879, at 11 a. m.

111 NEW YORK, *March 4th*, 1879.

Cross-examination of RAYMOND SALT:

X Q. 8. What were you hired to do when you were in Mr. Thatcher's employment?

A. I was a tinman.

X Q. 9. Did you work in the shop: if so, where was the shop at that time?

A. I did: the shop was at 602 Broadway.

X Q. 10. How many workmen were there employed there besides yourself?

A. Three: two besides myself.

X Q. 11. How long before Mr. Thatcher's application for a patent was it that you so saw this model?

A. I don't know when he applied for the patent, but I know when I saw the model.

X Q. 12. Don't you know that he made the application for a patent that spring, on which application he used this model that you so saw?

A. In the spring of 1867?

X Q. 13. Yes.

A. I don't know that.

X Q. 14. Did you see more than one model that spring?

A. Only one.

X Q. 15. How did you come to see the model that spring: did you know generally what was done in that shop by reason of your being a workman in it?

A. I saw it sitting on the desk near the little closet joining the desk, the closet under the stairs. I did know what was going on in the shop by reason of my being a workman there.

X Q. 16. How long did the model that you saw on the desk remain on it: did you see it on more than one occasion?

A. I only saw it once.

X Q. 17. Were you at your work when you so saw it?

112 A. I was at work at the time. I had occasion to go out into the store to get a drink of water and I saw the model on the desk and examined it.

X Q. 18. Was there anybody there when you examined it?

A. No, sir: it was a private inspection of my own.

X Q. 19. What are the names of the other two workmen?

A. Thomas Brennan and Thomas Smith.

X Q. 20. What were their duties?

A. Brennan was a tinman; Smith was a porter.

X Q. 21. When did you last see either of these two men?

A. Brennan I saw last two years ago; I saw him on Beekman St.: I also met Smith some three or four years ago, corner of Front and Peck slip. Smith is now dead.

X Q. 22. How long did you continue to work for Mr. Thatcher?

A. I have worked for Mr. Thatcher from the time I went there in that spring in 1867; 12 years this coming April—about the middle of April.

X Q. 23. Have you any memorandum or did you make any memorandum of the time when you saw the fire-place heater constructed like that model in operation?

A. I did not make any note of it.

X Q. 24. Do you recollect when the Thatcher Heating Co. succeeded to the business of Thatcher & Haviland?

A. I think it was in the spring of the year of 1868.

X Q. 25. Was the shop and office of the Thatcher Heating Co., after they took the business, still continued at 602 Broadway?

A. It was.

X Q. 26. Was there not another model in that shop or office in the spring of the year 1868?

A. Not to my knowledge.

X Q. 27. Do you mean that there could have been a model
113 of some improvement in the shop or office in the spring of the year 1868 and you not have known of it?

A. I was not in the shop at all times; sometimes I would be out at work somewhere.

X Q. 28. How long were you in the office in the spring of 1867, at the time when you so went to get a drink of water and looked at the model?

A. About five minutes or thereabouts.

X Q. 29. How much of the time did you devote to looking at the model?

A. About two or three minutes.

X Q. 30. Prior to going to work at that shop did you work at your trade as tinman, and at what place, just prior to going to that shop?

A. About ten or twelve years. I worked prior to that at George F. Merkley's, at 77 Bleecker street, at furnaces, stoves, and ranges.

X Q. 31. Did Merkly ever make any improvements on furnaces, stoves, or ranges?

A. I don't know of any improvement that he ever made himself directly.

RAYMOND SALT.

Adjourned to Thursday, March 6th, 1879, at 10 a. m.

THURSDAY, *March 6th*, 1879—at 10 a. m.

Adjourned to Monday, March 10, 1879, at 11 a. m.

114 Deposition of witnesses taken this ninth day of November, A. D. 1881, at Baltimore, Maryland, before me, Joseph C. Body, notary public of the State of Maryland in and for the city of Baltimore.

Present: B. F. Lee, Esq., of counsel for the complainants; A. J. Todd, Esq., of counsel for the defendants.

PHILIP KLOTZ, a witness of lawful age, produced on behalf of the complainants, being duly sworn on the Holy Evangely of Almighty God, makes oath, deposeth, and saith as follows:

First interrogatory. What is your name, age, residence, and occupation?

Answer. Philip Klotz; forty-eight; number two hundred and eighty-three Franklin street, Baltimore; am a tin and sheet-iron worker, particularly making stoves.

Second interrogatory. In whose employ are you, and how long have you been in such employ?

Answer. B. C. Bibb & Son's stove factory; went there in October, 1858; am foreman at their place.

Third interrogatory. Are you familiar with the fire-place heater shown in the drawing of a certain patent granted to Bibb & Augee April 30, A. D. 1861, number 32116, which drawing is now shown you?

Answer. Yes, sir; I am.

Fourth interrogatory. Can you produce a Bibb & Augee fire-place heater, such as is shown in that drawing?

Answer. This fire-place heater which I now produce is such a heater, except that the cold-air pipe marked "N" in the drawing is wanting, although the hole for the entrance of the air-pipe is there, and also the little air jets marked "W," and the circular cav-
115 ity to which the air-pipe leads, and from which the air passes through the jets, are also wanting; that is to say, the small annular plate cast on the inside of the top of the cylinder that went to form the small circular air chamber is not cast on this inside of this cylinder; in other respects this fire-place heater is correct.

The counsel for the complainants now offers in evidence the fire-place heater referred to by the witness, and the same is marked "Complainants' Exhibit Bibb & Augee Fire-Place Heater."

Fifth interrogatory. Are you familiar with the fire-place heater shown in the drawing of a certain patent granted to S. B. Sexton April 19, A. D. 1859, number 23716, which drawing is now shown you?

Answer. Yes, sir; I am familiar with it.

Sixth interrogatory. Can you produce an S. B. Sexton fire-place heater, such as is shown in that drawing?

Answer. Yes, sir; that is one like it.

The counsel for the complainants now offers in evidence the fire-place heater referred to by the witness, and the same is marked "Complainants' Exhibit Sexton Fire-Place Heater."

Seventh interrogatory. State whether you have been familiar with the mode and operation of the said Bibb & Augee heaters and of the said Sexton heaters, and how long?

Answer. I have known the Sexton heaters since eighteen hundred and sixty; I have been putting some of them up; I have been working on the Bibb & Augee heater ever since about eighteen hundred and sixty-one.

Eighth interrogatory. What has been the nature of your work on these heaters of late years?

116 Answer. I have been repairing some at different times; I have been repairing them to the number of some hundreds.

Ninth interrogatory. In the operation of these Sexton and Bibb and Augee heaters state what the fact was in reference to whether the coal contained in the fuel receptacle (marked "Q" in the Bibb and Augee and marked "H" in the Sexton drawing) became incandescent when the fire got well going or whether it remained in an unignited state.

Answer. It all got on fire.

Tenth interrogatory. To what particular of the construction of the apparatus was this due?

Answer. The top and the cover is too close to the fire, and the draft is above the top of the cover.

Eleventh interrogatory. When you have had repairs to make upon these Sexton and Bibb and Augee heaters in what condition have you found the fuel chamber (marked "Q" and "H" in the drawings above referred to) and its cover?

Answer. Most all of them is nearly all burnt out; the cover was warped and the top sometimes warped; the top was often burned on the under side, and the cover also; the heat often warped it into different shapes.

Twelfth interrogatory. Can you produce samples of such a fuel chamber, including the top and cover thereof, which will fairly illustrate the condition in which the fuel receptacle you have referred to commonly comes to you when the heaters require repairing?

Answer. Yes, sir, I can; hundreds of them.

Thirteenth interrogatory. Please produce such samples.

Answer. There are two of them.

The counsel for the complainants now offers in evidence the
117 fuel cylinders, tops and covers of one of them, marked, respectively, "Klotz Number One" and "Klotz Number Two."

Fourteenth interrogatory. In how short a time have you ever known these fuel cylinders, tops and covers, to be burnt out so as to need to be renewed?

Answer. I know some of them burn out in one season. I know some of them burn out at the top before the season is over; that the top gets larger and lets the cover drop down in the fire, and we have to put on a larger cover, and such large covers are kept in stock for this purpose.

Fifteenth interrogatory. State whether these old Sexton and Bibb and Augee fire-place heaters require frequent renewals of the parts referred to, stating in this connection any trade fact that would illustrate your answer.

Answer. There is a large business done in these castings by many dealers and by a number of foundries.

Cross-examination waived.

PHILIP KLOTZ.

First interrogatory. State your name, age, residence, and occupation.

Answer. Jesse L. Hutchinson; forty-seven years of age; I reside in Baltimore, and my occupation is that of a stove dealer.

Second interrogatory. How long have you been in the stove business, and state the name of your firm?

Answer. Twenty-seven years; Hutchinson Bros.

Third interrogatory. Are you familiar with the fire-place heaters known as the Sexton heaters, and the Bibb & Augee heater like Complainants' Exhibits "Bibb & Augee Fire-Place Heater" and "Sexton Fire-Place Heater;" and, if so, for how long?

118 Answer. I am and have known them for many years.

Fourth interrogatory. State whether you have been familiar with the mode and effects of the operation of the said Bibb & Augee fire-place heaters and of the said Sexton heaters during the period referred to in the last answer.

Answer. I have.

Fifth interrogatory. In the operation of these Sexton and Bibb & Augee heaters, state what the fact was in reference to whether the coal contained in the fuel receptacle became incandescent when the fire got well going or whether it remained in an unignited state?

Answer. It was generally thoroughly ignited.

Sixth interrogatory. Please indicate in both of said exhibits the part referred to in the last question as the fuel receptacle.

Answer. I mean the part that has the cover on immediately within the door.

Seventh interrogatory. To what particular in the construction of the apparatus was this due?

Answer. Because the fuel receptacle is entirely immersed in a hot chamber, and everything, therefore, becomes ignited.

Eighth interrogatory. What is the effect of this ignition of the fuel in the fuel-chamber upon the iron composing it, including its cover?

Answer. It burns it up.

Ninth interrogatory. In how short a time have you known this effect to be produced in whole or in part, but so as to render it proper to replace the fuel chamber and cover with new castings?

Answer. In less than one winter's use.

No cross-examination.

JESSE L. HUTCHINSON.

First interrogatory. State your name, age, residence, and occupation.

119 Answer. J. Hook Richards; sixty years; seven hundred and seventy-eight Lexington street, Baltimore; am a stove dealer.

Second interrogatory. How long have you been in the stove business?

Answer. I commenced that business about thirty years ago.

Third interrogatory. Are you familiar with the fire-place heaters known as the Sexton fire-place and the Bibb & Augee heater like Complainants' Exhibits "Bibb & Augee Fire-Place Heater" and "Sexton Fire-Place Heater;" and if so how long?

Answer. Ever since their existence; for many years.

Fourth interrogatory. State whether you have been familiar with the mode and effects of the operation of the said Bibb & Augee fire-place heaters and of the said Sexton heaters during the period referred to in the last answer?

Answer. I have.

Fifth interrogatory. In the operation of these Sexton and Bibb & Augee heaters, state what the fact was in reference to whether the coal contained in the fuel receptacle became incandescent when the fire got well going, or whether it remained in an unignited state.

Answer. It ignited generally.

Sixth interrogatory. Please indicate in both of said exhibits the part referred to in the last question as the fuel receptacle.

Answer. The cylinder, the top of which is level with the bottom of the door.

Seventh interrogatory. What is the effect of this ignition of the fuel in the fuel-chamber upon the iron composing it, including its cover?

Answer. It has the effect to burn the iron up.

No cross-examination.

J. HOOK RICHARDS.

120 U. S. Circuit Court, Southern District of New York.

THE THATCHER HEATING COMPANY *et al.*, Complainants,

vs.

JOHN H. BURTIS *et al.*, Defendants.

Testimony taken in rebuttal on the part of the complainants under and pursuant to the 67th rule of the Supreme Court of the United States, as amended, before John A. Shields, Esq., a standing examiner of said Court.

NEW YORK, *November 17th*, 1881.

Present: B. F. Lee, Esq., of counsel for complainants; A. J. Todd, Esq., of counsel for defendants.

Adjourned until Tuesday, November 22d, 1881, at 11 o'clock, a. m.

NEW YORK, *November 22d*, 1881.

Met pursuant to adjournment at 11 a. m.
Adjourned to November 26th, 1881, at 11 a. m.

121 NEW YORK, *November 26th*, 1881.

Met pursuant to adjournment, at 11 o'clock a. m.
Adjourned to Saturday, December 3d, 1881, at 11 o'clock a. m.
Adjourned to Saturday, December 10th, 1881, at 11 o'clock a. m.
Adjourned to Saturday, December 17th, 1881, at 11 o'clock a. m.
Adjourned to Monday, December 19th, 1881, at 11 a. m.

NEW YORK, *December 19th*, 1881—2 p. m.

Met pursuant to adjournment.
Present: B. F. Lee, Esq., for complainants, and A. J. Todd, Esq., for defendants.

Counsel for complainants offers in evidence a certified copy of the file-wrapper and contents in the matter of the application of William Burrows, filed December 4th, 1869, for patent for base-burning stove, and the same is marked "Complainants' Exhibit Burrow's Application," J. A. S., Ex., Dec. 19th, 1881.

122 Also a certified copy of the drawing in the matter of said application of Burrows, and the same is marked "Complainants' Exhibit Burrows' Drawing," J. A. S., examiner, Dec. 19th, 1881.

Also certified copy of assignment relating to the invention embraced in said application of Burrows from Burrows to B. C. Bibb, and release from Jordan L. Mott to B. C. Bibb, relating to the said invention, and the said papers being included in one certificate and marked "Complainants' Exhibit Burrows Assignment," J. A. S., examiner, Dec. 19, 1881.

JOHN M. THATCHER, a witness produced on the part of the plaintiffs, being recalled on behalf of the plaintiffs, deposes and says as follows:

The further examination of Mr. Thatcher objected to, as his examination was closed March 11th, 1879, it being agreed and understood that proofs on both sides were closed with the exception of examination of a professional expert on each side after the introduction of defendants' proof respecting the Nott heater.

Complainants' counsel does not admit such agreement.

Q. 1. Have you already been examined as a witness in this cause?

A. I have.

Q. 2. You have stated your occupation to be a manufacturer and inventor of stoves, furnaces, and ranges. How long have you been engaged in that business, and in what cities?

123 A. I have been engaged in that business since 1847; in the cities of Troy and New York, and the first part of that period in Pennsylvania, in the county of Northumberland and town of Milton.

Q. 3. At the time you made the invention covered by the patent on which this suit is brought state your acquaintance with the state of the art of constructing stoves and fire-place heaters.

A. I was acquainted with about all of the kinds of heaters and stoves that were in use at that time. I was engaged in business at that time at 602 Broadway, in the city of New York.

Q. 4. In your patent No. 104,376 I find the following language: "While fire-place stoves or heaters with protuberant cylinders or feeders or magazines were known prior to the date of my invention, I am not aware that the above combination of three features above referred to, viz., a top-feeding arrangement, a protuberant cylinder permitting such an arrangement, and a magazine within the cylinder has ever been known or used prior to my invention of the same. It has been the practice to so construct base-burning fire-place stoves or heaters that the fuel had to be introduced into the feeder or magazine through a doorway in front." State what, at the date of your invention or of your patent, a person skilled in the art would understand from the language of the patent to be the structure or structures referred to in the quotation as pre-existing.

Objected to as incompetent, improper, and as asking the witness to pass upon an issue which is for the court only to determine.

A. There are two, the Sexton and Bibb and Augee.

Q. 5. Can you refer to specimens of the structures which
124 the said language of the patent indicated at its date to one skilled in the art as pre-existing? And, if so, please do so.

Objected to as incompetent.

A. I can. One is marked "Complainants' Ex. Sexton Fire-Place Heater." The other is marked "Complainants' Ex. Bibb and Augee Fire Place Heater," and they are exhibits in this cause.

Q. 6. To a person skilled in the art would the said language of the patent, at its date or at the date of the invention, have indicated any structures as pre-existing, other than those named in your last answer? And, if so, please describe or designate them.

Same objection.

A. No, it would not.

Q. 7. What is the object of a fire-place heater? And state how it acts.

A. The first and primary object is to heat the room thoroughly in which it stands. The next, to heat the rooms above. It acts combinedly to warm rooms above and below, or, in other words, several separate rooms at the same time. A structure necessary to do or warm the rooms, as stated, must be of a construction as follows: A portion of the apparatus in which it sits, or in which it is placed, must be outside of the mantel-piece, and a portion inside of the same. Air has to be introduced either from the room in which it is placed or from without, which air has to be heated by coming into contact with the heated surfaces which are in the rear part of the apparatus or heater, and conveyed from there through tin pipes to the rooms

above the heater. The room in which it stands is heated by a large portion of the apparatus being placed outside of the mantel-piece.

125 Q. 8. State what is the importance, if any, in a fire-place heater of having the fuel burn in such position and such manner as to cause the part of the apparatus that is outside of the mantel-piece or fire-place, to be highly heated.

Same objection, and as leading.

A. The importance is very great for the reason that it thoroughly warms the room in which it stands.

Q. 9. From the nature of a fire-place heater is it feasible or not for the persons in the rooms other than that in which it stands to regulate the fire, and thus by varying the combustion regulate the heat utilized in the rooms above?

Same objection.

A. It is not.

Q. 10. State whether or not this circumstance has any bearing upon the question whether uniformity of combustion so as to form uniform generation of heat is of special importance in a fire-place heater?

A. It is of vast importance that there shall be uniformity of combustion for the reason that uniformity of heat can be obtained without any special attention.

Q. 11. You have stated in answer to question 9 that it is not feasible for the persons in the rooms, other than that in which the fire-place heater stands, to regulate the fire so as to vary combustion, and you have also stated that uniformity of combustion is of vast importance in a fire-place heater. Have these two facts a relation to or connection with each other?

Same objection.

A. They have.

126 Q. 12. In fire-place heaters, as constructed at the present day, is any device adopted for the purpose of effecting uniformity of combustion, so as to heat the rooms above with regularity? And, if so, state what such device is.

Same objection.

A. A magazine in the fire-place heater.

Q. 13. Please state to what extent in fire-place heaters there has been introduced since the issue of your patent, the combination of a cylinder or body projecting outward from the mantel or frame, a fuel magazine or feeder within the cylinder, and an opening through which the said magazine can be fed from above, as described in your patent, and how extensively fire-place heaters have within that time been made with magazines extending to the feed opening of the outer casing, as described in your patent.

Same objection, and as assuming that no such heaters were introduced prior to said Thatcher's invention.

A. The combination referred to has been introduced into nearly or quite everything that has been made; 999 out of a 1,000 have been made having their magazines feed from the top and through the outer casing. The device was generally introduced very shortly after the patent was issued.

Adjourned to Wednesday, Dec. 21st, 1881, at 11 o'clock.

NEW YORK, *Dec.* 21*st*, 1881—11 o'clock a. m.

Met pursuant to adjournment.

Present: Counsel as before.

Adjourned, by consent, to Thursday, Dec. 22d, 1881, at 11 a. m.

127 NEW YORK, *Dec.* 22*d*, 1881—11 o'clock a. m.

Met pursuant to adjournment.

Present: Counsel as before.

Examination of Mr. JOHN M. THATCHER continued:

Q. 14. To what extent have the owners of the patent No. 104,376 introduced the device embraced in the claims in controversy in this suit into public use?

Objected to as incompetent and immaterial.

A. By the tens of thousands.

Q. 15. What, if any, outstanding stove was there, having a magazine, at the date of your invention, that could have been set up in a fire-place so as to be made practically useful in that situation?

Objected to as incompetent.

A. There was none.

Q. 16. In such structures as the fire-place heater shown in your patent and "Defendants' Exhibit Burtis & Graff Fire Place Heater," what is the condition of the fuel in the magazine?

Same objection.

A. Unignited.

Q. 17. Where is a fire-place heater set up?

A. In front of and in the mantel of the room in which the heater is placed.

Q. 18. About what is the size of the opening of a mantel (such as you refer to in your last answer), in which the apparatus must
128 go, that is to warm the room in which it is placed at the same time that it warms rooms above?

Objected to as indefinite and general.

A. About 2 feet to 2 feet 4 wide and 2 feet 4 high.

Q. 19. What bearing does this fact have upon the construction of a fire-place heater?

Same objection.

A. It compels you to construct the apparatus adapted to these limits.

Q. 20. Considering the size of the apparatus and the necessarily small compass within which it must act is much or little required of it?

Same objection.

A. More is required of it than any other heating apparatus made.

Q. 21. In view of the amount of work required of it, and of its acting within so small a compass, state whether or not prior to your invention it was supposed that a magazine to hold a reserve of unignited coal fed from above or through the outer casing was applicable to it and still enable it to satisfactorily do the required work of warming the room in which it was set up and at the same time satisfy those occupying the rooms above?

Objected to as incompetent and leading.

A. It was not.

Q. 22. Prior to the time of your invention state in whose fire-place heaters a fuel receptacle had been introduced.

Objected to as incompetent.

129 A. S. B. Sexton's and Bibb & Augee. Specimens of each of those heaters are here as exhibits.

Q. 23. In these exhibits how is this fuel receptacle situated in reference to the combustion chamber, and where do the burning gases pass in reference to the fuel receptacle?

A. It is in the combustion chamber, the burning gases passing around and over it, entirely immersing it in the products of combustion on their way to their exit pipe and the chimney, the result of which would be to ignite the mass of coal in the receptacle.

Q. 24. Suppose a fire-place heater to be made with a top-feeding magazine to hold unignited coal, the base of the magazine being so large as to form the entire top of the combustion chamber, would such a structure practically answer the purposes of the fire-place heater shown in your patent?

Objected to as incompetent and leading.

A. It would not.

Q. 25. In such a construction could combustion take place around the magazine and against the outer wall or cylinder of the heater?

Same objection.

A. It could not.

Recess taken till 1.30 p. m.

After recess.

Q. 26. In the operation of a fire-place heater where does the chief difficulty arise, in the heating of the lower room or the heating of the upper room or rooms?

A. In the heating of the lower room.

130 Q. 27. State how many rooms other than that in which it stands a fire-place heater is capable of heating, or is commonly used to heat.

A. From one to three.

Q. 28. Is it capable of heating all three of the upper rooms in an ordinary city house?

A. Very commonly it does; these heaters are generally used for city houses.

Q. 29. In order that the room in which it stands should be properly heated, state whether or not it is necessary in a fire-place heater having a magazine containing unignited fuel that combustion should take place around the magazine and against the outer wall or cylinder of the heater which projects into the room in which the heater stands.

Objected to as incompetent and leading.

A. It is all important that combustion should take place around the magazine, and the products of combustion forced as much as possible against the front part of the heater before passing to the rear to heat the surfaces that are to heat the air of the upper rooms.

Q. 30. Have you examined and do you understand the structure marked "Exhibit Brown No. 2," and the wood-cut marked "Exhibit Brown No. 3," and have you heard the evidence of defendants' witness, Brown, in relation to the same?

A. I have examined the exhibits referred to in the question, and believe I understand the same, and have heard the evidence of Brown in relation to the same.

Q. 31. State whether a heater constructed like the model "Exhibit Brown No. 2" would hold coal a size that could practically burn in a stove or heater?

Objected to as incompetent and leading.

131 A. It would not.

Q. 32. Suppose the heater intended to be represented by said "Exhibit Brown No. 2" to have fire-brick introduced in its sides and back as described by the witnesses, and to be set up in a fire-place with its castellated top and side pieces perforated as described; state the facts as to the capacity of such an apparatus to heat the room in which it is set up simultaneously with a room or rooms above.

Objected to as incompetent and improper.

A. In the first place, it would have little or no capacity for heating rooms simultaneously; the brick on its sides and the air space in front would thoroughly prevent the room in which it was placed being heated. The construction would seem better adapted for the burning of coal than for the purpose of generating heat. The upper part, or box, containing the lid on its top, which holds unignited coal, is not capable of generating any heat.

Q. 33. Suppose there was an open flue behind the heater in the fire-place leading to and heating a room on the floor above; what would pass through the perforated sides and top piece that are shown in the exhibit ornamented by castellations.

Same objection.

A. The air of the room, and whatever air has come in contact with the front part of the heater.

Q. 34. Under such circumstances state whether the heater could throw into the room any heat generated within the fire-place and behind the castellated top and side pieces perforated as above mentioned.

Same objection.

A. It could not.

132 Q. 35. Suppose there was no open flue behind the heater in the fire-place leading to another room; what would pass through the perforations in the top and side pieces before mentioned?

Same objection.

A. The heated air generated by the heating surfaces behind the perforated sides and top. It would pass into the room in which the apparatus was placed.

Q. 36. In the wood-cut to which your attention has been called, marked "Exhibit Brown No. 3," I observe that this apparatus is called the "Saracenic parlor grate for dining-rooms," &c. Does this title serve in any manner to point out or indicate how this apparatus was really intended to be used, taken in connection with the descriptions given of its perforated sides and top piece, and the fact that you have mentioned that all the surfaces in front of said side and top pieces are prevented from communicating heat to the room by the fire-brick on the sides, the air space in the front, and the coal-box filled with unignited fuel at the top?

Same objection, and as leading.

A. It would indicate that it was intended to be used only as a dining-room heater for the room only in which it was placed, or if placed in any other to heat that room only.

Q. 37. State whether it was calculated to heat the room in which it was placed by direct radiation or by heated air coming into the room from behind the heater, or how otherwise.

Same objection.

133 A. There is not any doubt in my mind but it was to heat the room in which it was placed by heated air generated by the surfaces behind the perforated sides and top which passed through these openings outward and upward, thus equalizing the temperature of the room, and when used as a dining-room heater it no doubt was designated not to heat by direct radiation from its front, but by heated air from its rear. A dining-room is intended for people to dine in, and for those seated at the table in front of the heater it is much better to have the room uniformly heated by heated air, as I have stated, than to have a direct radiation of heat from the front of the heater upon their backs.

Q. 38. State what is the quality of the air that fills the air space extending across the whole front of the heater in which are the 4 mica light openings shown in the model.

A. Cold air. It passes in through the opening at the bottom and supplies combustion.

Q. 39. Within your experience has any such heater as the one intended to be represented by "Defendants' Exhibit Brown No. 2" or "Defendants' Exhibit Brown No. 3" existed or been in use? And state how your place of business has been situated in relation to the place of business of the successor of Nott, who is stated to have designed and sold such heaters.

Objected to as incompetent and immaterial.

A. Within my experience there has not been any such heaters made or used as referred to in the question. My business since 1872 has been at 244 Water street, next door to that of the successors to Nott, which is at 242 Water street, New York, where they have been located during my entire acquaintance with New York city.

Q. 40. Look upon Exhibits Budd No. 1 and Bibb Shoo Fly, and state whether they are complete; and, if not, what parts are lacking?

134 A. In the first place, I will state that they are neither of them complete. I find a number of small, unimportant pieces missing, and I also find all the important parts which are designed to heat air for the upper rooms that belong to the rear of Budd No. 1 missing. They consist of sheet-iron radiators which are to connect to the pipe opening in the rear of said heater. I find a number of unimportant parts missing from the Bibb Shoo Fly, and also the side and back radiators thereof.

Q. 41. What opportunity have you had for knowing that the heat-radiating parts of Exhibit Budd No. 1 belong to such a heater and are missing?

A. I have taken down numbers of them and never found one without these radiators.

Q. 42. Without these radiators would Exhibit Budd No. 1 be a practically efficient fire-place heater?

A. It would not.

Q. 43. Can you show by reference to any exhibit in this cause what part should be supplied to Exhibit Bibb Shoo Fly to supply the radiating surfaces of which you have spoken?

A. I can; the Bibb and Augee comes as near to it as anything, and, as far as I can see, it is exactly in that respect the same.

JOHN M. THATCHER.

Adjourned by consent to Friday, December 23d, 1881, at 11 a. m.

N. Y., *December* 23*d*, 1881—11 a. m.

Met pursuant to adjournment.

Present: Counsel as before.

Adjourned to 2 p. m.

135 2 o'clock P. M.

Present: Counsel as before.

Complainants' counsel states that the witness was produced for cross-examination this morning at 11 a. m., and is now again produced for the same purpose, and that it is imperatively necessary that the witness should be released from the stand, as he is not well and is seeking to arrange to go away for a change of climate. For that reason complainants' counsel must insist that the cross-examination be proceeded with at once, as he cannot undertake to keep the witness in attendance.

Mr. James H. Hunter, who appears on behalf of Mr. Todd, defendants' counsel, requests that the cross-examination of this witness be adjourned till Tuesday, December 27th, 1881, as that is the very earliest day (only one working day intervening) that Mr. Todd can attend for that purpose.

Counsel for complainants says that he has every disposition to accommodate counsel, but that it is impossible to adjourn the matter till Tuesday, but that he will produce the witness for cross-examination at 11 a. m. on Saturday, December 24th, 1881.

Adjourned by consent to Saturday, December 24th, 1881, at 11 a. m.

136 New York, *Dec. 24th*, 1881—11 a. m.

Met pursuant to adjournment.

Present: Mr. B. F. Lee, of counsel for complainants, and the witness, Mr. John M. Thatcher, who is produced for cross-examination.

Mr. Mailler, representing Mr. Todd, of counsel for defendants, appeared at 11.40 a. m.

Adojurned to 2 p. m. at the request of Mr. Mailler.

Met pursuant to adjournment.

Present: Mr. B. F. Lee, of counsel for the complainants, and the witness, Mr. John M. Thatcher, who is produced for cross-examination.

Mr. Mailler, representing Mr. Todd, of counsel for defendants, appeared at 2.20 p. m., and Mr. Todd appears at 2.40 p. m.

Adjourned at request of defendants' counsel to Tuesday, December 27th, 1881, at 10 o'clock a. m.

New York, *Dec. 27th*, 1881—10 o'clock a m.

Present: Counsel as before.

Cross-examination of Mr. John M. Thatcher by A. J. Todd, Esq.:

X Q. 44. When did you commence business in Troy?

137 A. It was in 1850. I went there, to Albany and Troy, in 1849. I commenced business in Troy in the spring of 1850.

X Q. 45. When did you commence business in the city of New York?

A. In the spring of 1853.

X Q. 46. At what place?

A. I think it was 210 Water street, but I am not sure.

X Q. 47. How long did you continue business there, and when did you go to 602 Broadway?

A. I continued there till January or February of the year following. I went to 602 Broadway in the spring or the early part of the summer of 1866. In the meantime I was at 52 Cliff, 370 Broadway, 434 Broadway, 77 Bleecher, and 210 Mercer.

X Q. 48. When did you return to Water street?

A. In the spring of 1872, and have been there ever since.

X Q. 49. When you say, in answer to Q. 4, that "a person skilled in the art would understand from the language of the patent," &c., do you not mean that at the time of the making use of such language as is contained in your specification that you only knew of these two structures, the Sexton and Bibb & Augee, at the time when you directed the preparation of such specification?

A. I did not.

X Q. 50. Do you not, by the expression in that 4th question, "person skilled in the art," &c., mean to refer to your own knowledge on the subject?

A. Not wholly.

X Q. 51. Can you answer for other people's knowledge, as well as for your own?

A. I think I can, for the reason that any one skilled in the art would be possessed of the same knowledge as myself as to the existence of fire-place heaters as they existed at that time.

138 X Q. 52. Well, then, at the time that you directed the drawing up of your specification did you talk with the late Charles J. Sheppard, Jordan L. Mott, and other well known stove and furnace dealers in order to learn what such prominent dealers knew of the state of the art respecting fire-place heaters?

A. I did not.

X Q. 53. What person supposed to be acquainted with the state of the art did you at that time consult and advise with, if any?

A. I am not aware that I consulted with any.

X Q. 54. In Q. 10 you say that "it is of vast importance that there be uniformity of combustion for the reason that uniformity of heat can be obtained without any special attention." Explain more fully what you mean by this general statement.

A. I mean that it is necessary to have an amount of unignited coal in reserve which supplies fuel to be consumed instead, as is done in the usual way, where there is no coal held in reserve, through a door by persons in attendance.

X Q. 55. You say, in answer to Q. 15, that there were no outstanding stoves having a top magazine feed at the date of your invention that could be set up in a fire-place so as to be made practically useful; have you knowledge what outstanding top magazine feed stoves existed at the date of your invention?

A. I believe I have—of most of them at least.

X Q. 56. Why could not some of those of which you then had knowledge have been so set up so as to be made practically useful in that situation?

A. Because it requires a structure of a different organization. An apparatus to be practically useful to go into the mantel of a fire-place must be of a twofold nature—a stove and a furnace combined.

X Q. 57. What do you mean such stove must contain in its nature when so situated?

139 A. It must contain the necessary qualities for thoroughly heating the room in which it is placed and also sufficient surface within the mantel to do the work required of it for the rooms above—that is to say, one must act almost as though the other did not exist.

X Q. 58. How do you mean that one must act as though the other did not exist?

A. I mean to say that there shall be sufficient in the room in which it sits, or, in other words, when it has done its work there it will go hence into the surfaces in the rear and do the work required of it for above.

X Q. 59. Do you mean to say that there must be enough heating surface not only to heat the room in which the stove or heater is placed, but also enough heating surface on the stove or heater at the rear of the mantel to heat the room above as well?

A. Yes, except that I would say that I don't understand the word "on" as used in the question where it says "heating surface on the stove."

X Q. 60. Now, what elements does your patented heater contain as a fire-place stove or heater which the outstanding stove with top magazine feed did not contain?

A. It contains all that is necessary in front of the mantel of the room in which it sits to effectually warm that room and to be ornamental, at the same time possessed of a sufficient amount of surface within the mantel and fire-place to warm the rooms above.

X Q. 61. Did not such outstanding stove contain enough surface at its front and rear to do this double duty?

A. It did not.

X Q. 62. Were not such kind of outstanding stoves—that is, top magazine feed stoves—used at the date of your invention as

140 an outstanding stove to heat not only the room in which the stove was situated, but also the room above?

A. There were outstanding stoves made for heating rooms above and below, but I can't say as to their date. I mean now stoves that are not adapted to the fire-place or placed in it.

X Q. 63. If such top magazine feed outstanding stoves heating two or more rooms existed at the date of your alleged invention here in controversy, why could not such a stove be adapted to a fire-place by merely reducing the size of the stove and its jacket, by which the heat is conveyed to the upper apartment?

A. It could not. It would have to undergo an entire change in the first place to get it to the proper dimensions and shape suitable for the room mantel and fire-place in which it is to be placed, and then it would have to be connected in its rear with additional sur-

faces to receive the products of combustion after passing against that portion of the surface of the room in which it is placed to do the work required of it for the room or rooms above. An apparatus thus changed would not be an acceptable one to be placed entirely out in a room for either warming rooms above or below.

X Q. 64. Do you consider that changing the dimensions and shape of a stove to get it to fit a mantel and fire-place is invention?

A. I do consider it an invention to so construct an apparatus designed to heat the room in which it is placed and at the same time rooms above containing a magazine sufficient to hold coal in reserve that can be fed from above or through the outer casing.

Answer objected to as not responsive.

X Q. 65. Did not a fire-place heater containing sufficient heating surface at its rear to assist in heating the room above as well
141 as heating surface at the front of the heater to heat the room in which the heater was situated exist at the date of your invention, and were not such heaters extensively used at that time in the cities of Baltimore, New York, and elsewhere in the United States?

A. There were such heaters made, but to what extent I do not know; and they may have been used in the cities referred to in the question, but, so far as my information goes, they were not entirely satisfactory, and particularly for the rooms in which they were placed.

Last clause of answer objected to as volunteered on the part of the witness.

Recess taken till 2.30 p. m.

After recess.

X Q. 66. Then there was in such fire-place heaters or stoves referred to in X Q. 65 a rear heating surface, was there not?

A. There was.

X Q. 67. There was also in such prior fire-place heaters or stoves referred to in X Q. 65 a combustion chamber or chamber above the grate surface sufficiently large for the combustion of the gases in the front part of the stove before such gases passed off to the smoke flue, was there not?

A. Yes, sir; there was.

X Q. 68. Was there not more space in such combustion chamber for the proper combustion of such gases than if a considerable portion of such combustion chamber was occupied by a top magazine feed, as shown in your patent?

A. There was more space than there would be in the heater,
142 as shown by my patents, but I can't say that this space would more thoroughly be the means of consuming the gases, and here is where the difficulty, in my mind, existed, and in the minds of the makers of the fire-place heaters referred to in the question.

X Q. 69. Now, is [it] not a fact that the top magazine feed is introduced in the top of the heater or stove shown in your patent for

the simple and only purpose of getting a continuous feed of coal down onto the grate surface just as prior to your alleged invention a top magazine feed was introduced into an outstanding stove?

A. It was not introduced solely for the purposes of having a continuous feed, but that it would cause a simultaneous action in front and rear, and that the gases rising from the coal in a combustible state were forced to the wall of the apparatus from the top of the coal to the top of the heater, thereby making the front of the heater hotter than it otherwise could be made by an open chamber over the top of the burning fuel.

X Q. 70. But the top magazine feed was not introduced into an outstanding stove for any different purpose, and it accomplishes there, does it not, everything which it accomplishes in the stove or heater shown in your patent?

A. It does not, if I understand the question right.

X Q. 71. If it accomplishes more in your stove or heater that it accomplishes in the outstanding stove, how is it that the specification of your patent is so silent respecting what you say or now think such top magazine feed accomplishes in your stove or heater over what it accomplishes in the outstanding stove?

A. I suppose that if my heater was made in every respect like an outstanding magazine stove it would accomplish the same. I understand the specification of my patents to describe a fire-
143 place heater and not an outstanding stove. I suppose it describes all that is necessary.

Answer objected to as not responsive.

X Q. 72. Take an outstanding stove with a jacket on it so that such stove will heat also the room above that in which the stove is situated, is there any substantial difference between it and your fire-place heater or stove, and would not they be alike, except as to location and a little more rear-heating surface which is attached to your fire-place heater or stove, by reason of the different location admitting of such increase of rear-heating surface?

A. There is a substantial difference.

X Q. 73. Where is the difference between the two stoves as described in the last question (X Q. 72)?

A. The stove referred to is entirely enclosed in a jacket. My fire-place heater referred to in the patent, so far as that portion of it is located which is in the room in which it is placed, has no jacket, but its body, or so much of it that is outside of the mantel, is exposed to the room.

X Q. 74. But both of the devices referred to in X Q. 72 and 73 have a continuous feed of coal onto the grate surface from a magazine feed, which passes up to and through the top casing, and both heat not only the room in which they are placed, but the room above, do they not?

A. They do, but very differently.

X Q. 75. How differently?

A. One makes little or no heat in the room in which it stands, while the other does each about equally, or as nearly as is required.

X Q. 76. The defects or advantages in either of these two devices, however, is not due to the magazine top feed, is it?

A. It is due to a different organization of parts in combination with the magazine.

144 X Q. 77. How can a top-feed magazine be a disadvantage in an outstanding stove or heater, if it is of advantage in a stove or heater placed into a fire-place?

A. I don't understand it to be a disadvantage in an outstanding stove.

X Q. 78. How, then, if it—the top magazine feed—is placed in an outstanding heater, which heats the room above as well as the room in which the outstanding heater is located, will it fail to accomplish all that you claim it accomplishes when placed in a heater located in a fire-place, as claimed in your patent?

A. It fails to accomplish the same on account of its being constructed different, one having a casing surrounding the body of the heater and the other not.

X Q. 79. But the functions and operations of the top magazine feed are substantially the same in each, are they not?

A. If these two apparatuses were substantially alike in every particular, located precisely alike and used precisely alike, there is no question in my mind the result would be the same.

X Q. 80. What you mean is this, is it not then, that the top magazine feed being introduced into different styles or forms of stoves, causes a different effect in degree?

A. I think degree has nothing to do with it. It is mainly in its construction and combination.

Answer objected to as not responsive.

X Q. 81. When did you first see an outstanding stove having a top magazine feed so that such stove could be fed from the top plate of the stove, and the body of fuel could be contained in such magazine feed with a diameter less than the grate surface, so as to

145 admit of a space between the casing of the stove and exterior surface of such magazine feed for the mixing and combustion of the gases?

A. I understand the Q. to refer to the Littlefield Morning Glory. I don't understand this Morning Glory stove made by Littlefield to be a top feeding magazine stove, but I do understand it to be in every respect, except one, like the Sexton—that is, that there is a passage over the top of the magazine for the products of combustion to the smoke-pipe, and that this magazine is entirely immersed after fire is kindled and during operation, a consequence of which was that the lower portion of the magazine had to be lined with fire-brick to prevent its destruction. There is one respect in which it is not like the Sexton—that is, that I do not understand the grate to be larger than the mouth of the magazine, which is the case in the Sexton.

X Q. 82. Confine yourself in your answer to X Q. 81 to understanding stoves in which the top of the magazine feed comes into the top plate of the stove, and so that when the stove is in operation

the gases which are combusted cannot pass across the top of such magazine feed before they find their way into the smoke-pipe.

A. I can't call to mind of seeing any such stove prior to this invention of mine.

X Q. 83. Do you mean to testify that neither Littlefield nor any other maker of magazine feed outstanding stoves had not, up to the date of your invention, made and introduced into public use an outstanding stove in which the magazine feed came clear up through and into the top plate of the stove, or substantially so?

A. I do not. I say that I had not seen them.

X Q. 84. Conceding the existence of such a stove as referred to in the last question, also of the Nott outstanding top feed stove, the Nott fire-place heater, in which the room above as well as that in
146 which the heater was placed was heated; also of the Baltimore type of fire-place heaters having extended rear heating surface, either with or without the partial magazine feed, shown in the Sexton heater, and having a cylinder extending some distance into the room in front of the mantel, what do you consider your invention of fire-place heater to consist of?

A. My fire-place heater consists of a protuberant body—a magazine within a cylinder or body which can be fed from above or through the outer casing, with rear heating surfaces; I don't understand the Nott dining-room heater to possess the elements of a protuberant body or cylinder and a magazine within it, nor do I understand that it ever heated rooms above and below, or was intended to, and I do not understand the Sexton heater to have a protuberant body.

All from "I don't understand the Nott," &c., down to end of answer objected to as not responsive.

Adjourned to Wednesday, Dec. 28th, 1881, at 10.30 a. m.

NEW YORK, *Dec.* 28th, 1881.—10.30 a. m.

Met pursuant to adjournment.

Present: Counsel as before.

Cross-examination of Mr. JOHN M. THATCHER continued:

X Q. 85. Now, assuming that at the date of your inven-
147 tion an outstanding stove having a top magazine feed extending through the upper casing of the stove so as to be fed through the top thereof, the diameter of the lower portion of the magazine feed being less than that of the grate surface, existed and was in public use; also the Nott outstanding top-feed stove, the Nott fire-place heater, and the Baltimore fire-place heater, as set forth in X Q. 84, what do you consider you had invented?

A. Just what the language of the patent describes; I repeat the language of the patent.

X Q. 86. Will you please state, in your own language, what you consider you had invented at the date of the completion of your alleged invention, assuming that at that date outstanding stoves having top magazine feed existed, as set forth in the last question?

A. A protuberant base-burning magazine fire-place heater that fed from the top or through the outer casing.

X Q. 87. You mean to say that you claim to be the first person who extended the magazine feed containing an opening at its base smaller than the grate surface up to and through the outer casing, whether in an outstanding stove or in a stove and heater located in the fire-place?

A. I claim to be the first to make a fire-place stove with a protuberant body, a magazine within the cylinder of the body, that could be fed from above, extending through the outer casing.

X Q. 88. Then you concede that such top magazine feed existed in outstanding stoves, do you?

A. I concede that they do; but at what date I am not positive about.

X Q. 89. Do you not know at the present time, at least, that at the date of your alleged invention such outstanding stoves as inquired of in the last question were in public and common use in the United States?

A. I do not.

148 X Q. 90. You do not at the present day intend to claim that you are the inventor of such a magazine feed as enquired of in X Q. 87, no matter in what stove or heater it is inserted and used, do you?

A. I claim to have invented a magazine fire-place heater, as described in the patent No. 104,876, and nothing about outstanding stoves.

X Q. 91. Then you were not the first person to extend the magazine feed up to the top plate of any stove or heater, and contracting the opening at the base of the magazine feed so that such base should be less in diameter than the diameter of the grate surface?

A. As I have previously and repeatedly stated, I have no positive knowledge at what date outstanding stoves were made having magazines extended to the entire top of the stove. If the word "heater" refers to fire-place heaters, then I am the first, as described in the patent.

X Q. 92. Is not the condition of the fuel contained in the top magazine feed of these outstanding stoves, also of the outstanding jacketed heaters referred to by you, "unignited," as you call it, during the operation of the stove in use?

A. I think it is.

X Q. 93. Please look at the wood-cut illustration now shown you and state whether it does not exhibit a magazine feed extending clear up to and through the top casing of the stove, and also a jacket covering a portion of the stove, but not the whole of it, as stated by you to be the case with some outstanding heaters which you had seen at the date of your alleged invention.

Objected to as incompetent and irrelevant and as not identifying the wood-cut; also as not cross-examination (thus making witness the defendants'); also as an attempt to introduce new evidence

149 in defence after the closing of the defendants' evidence and

during plaintiffs' rebuttal, and also as an attempt to introduce matter tending to show prior knowledge, use, publication, or patenting not properly pleaded in the answer.

A. It does not show a magazine extending up to and through the top casing of the heater. It has a jacket covering a portion of the heater. I am not aware that I have stated the language in the question commencing at "which you had seen at the date of your alleged invention."

X Q. 94. What is the cover in the top casing of this wood-cut illustration which I have marked with a letter A but an opening in the top casing to the top magazine feed?

Same objection.

A. It is an iron plate with an opening at its top for the discharge of heat to the room above and a register in front and openings at either side for the admission of air into the room when the damper is closed that is shown projecting up in the hot-air pipe.

X Q. 95. Then where is the coal inserted, as there is no door placed in the vertical and cylindrical walls of the stove?

The same objection.

A. I am unable to say; there is nothing that I can see in the cut to show where the fuel is put in.

Defendants offer the wood-cut illustration in evidence, and the same is marked "Defendants' Exhibit Outstanding Top Magazine Feed Heater," Dec. 28, 1881, J. A. S., examiner.

150 Exhibit objected to on the like grounds and the title objected to as unwarranted.

X Q. 96. From the fact that there is no opening shown in the vertical or cylindrical walls of the stove represented by this wood-cut illustration, would you not say that I have indicated by the letter A a point on the top plate of the stove where the fuel is inserted into a fuel magazine contained within the stove?

Same objection as to previous question.

A. I think very probably that there is an opening between the bead near the top of the plates and the bead directly under a little projection shown in the cut (designed to open and shut the register) for the introduction of fuel. I understand this Littlefield parlor furnace or double heater to be, so far as the magazine in it is concerned, the same as I have described the Littlefield Morning Glory yesterday.

X Q. 97. Do you mean to testify that the magazine feed is enveloped at its top by the burning gases proceeding from the combustion chamber to the smoke-pipe; and will you so testify that such is the case with respect to the heater represented by Exhibit Outstanding Top Magazine Feed Heater?

Same objection.

A. I do say that if this cut as shown is of a date at or prior to the invention of my fire-place heater, then the magazine that is placed within it is immersed in the burning gases proceeding from the combustion chamber to the smoke-pipe.

Recess taken till 2 p. m.

151 After recess.

At 2 p. m. the witness and complainants' counsel attend and the cross-examination is resumed at 3.25 p. m.:

X Q. 98. Please look at the print now shown you and state if it does not exhibit the progress of the art in base-burning outstanding stoves of the Morning Glory type, and if you did not at the date of your alleged invention have knowledge of all the structures shown on this print from the year 1861 and up to the year in which you claim to have made your alleged invention?

Same objection.

A. It is a print designed to show the Morning Glory stove; I have had knowledge of all the structures shown on this print.

Defendants' counsel offers in evidence the print, which is marked "Defendants' Exhibit Morning Glory Print," J. A. S., examiner.

Same objection as to last exhibit.

X Q. 99. Now, is it not true that some of Littlefield's Morning Glory outstanding stoves contained the top magazine feed over the top of which the products of combustion did not pass before they made their exit through the smoke-pipe, while in others of his said Morning Glory stoves he permitted at times, by a proper damper, such products of combustion to so pass over the top of the magazine feed?

Same objection as to preceding question.

152 A. It is not true. As I understand, each and every one of these stoves between the dates referred to in the question had a damper at the top of the magazine under the top of the stove and chamber of combustion that leads to the smoke-pipe, which damper, if left open at any time, except in the act of putting coal into the magazine, would allow combustion to pass up through the magazine and fuel therein and ignite the whole mass, instead of combustion being at the base and passing over the external part of the magazine above the damper to the smoke-pipe.

X Q. 100. Then do you mean that in some of these stoves, instead of a flue around the top edge of the magazine feed to permit of the products of combustion passing over such magazine to the smoke-pipe, there existed only a passage up through the magazine feed to the smoke-pipe which could be opened or closed at will by a damper?

Same objection.

A. I mean that every one of these stoves between the dates referred to had a passage entirely around the magazine which connected directly to the flue under the top of the stove and above the slide which connected with the smoke-pipe, and at all times during the operation of these stoves, except when the damper was drawn out at the time of putting coal into the magazine, which damper I understand, by directions for using the stove, must be kept in or closed to prevent combustion from passing up through the magazine instead of around and over its top and above the cover.

X Q. 101. Did not the inventor, Littlefield, give this instruction to those using the Morning Glory stove, that the damper covering the top of the magazine feed must be pulled out just before putting coal into the magazine for the purpose of passing off into the
153 smoke-pipe any confined gases which may have accumulated there, and which, if not first passed off before feeding the magazine through the cover in the top casing, would result in an explosion when such confined gases would meet the oxygen of the atmosphere at the top of the stove?

Same objection.

A. I don't understand his direction to be particularly directed to the accumulation of gases, but to pulling it out to allow the introduction of coal into the magazine and to be shoved in to prevent combustion in the magazine. I do understand that the products of combustion, when the damper is closed, cannot reach the smoke-pipe in any other way but to pass around the magazine over its top and the cover of the same to the smoke-pipe.

X Q. 102. Could he not have got coal into the magazine by pulling off the top cover of the stove, and was a damper at the top of the magazine necessary for such primary object? I refer to the first part of your last answer where you say "he directed pulling the damper out to allow the introduction of coal into the magazine," as if a damper was necessary as a cover and to be pulled out as such for the introduction of coal when there was a cover in the top casing the stove specially provided for that purpose.

Same objection.

A. He could not have got coal into the magazine by pulling off the top cover of the stove until the slide at the top of the magazine was drawn out; and I don't understand that the damper at the top of the magazine was necessary for the simple purpose of filling it with coal.

X Q. 103. Are there not in all top feed magazines, whether for outstanding stoves or fire-places, what are termed vent-holes—
154 that is, openings of some kind through which the confined gases can pass off from the upper part of the top magazine feed?

Same objection.

A. There are not.

X Q. 104. Are not such an advantage, whether contained in outstanding stoves or in fire-place stoves or heaters?

Same objection.

A. I don't consider they are.

X Q. 105. Would a fire-place stove or heater containing them in the top magazine feed be as much an infringement of your alleged invention as if it did not contain them?

Same objection.

A. If its construction contained the elements of the combination it would not be material whether it contained said vent-holes or not.

X Q. 106. You say in your specification that you claim a fire-place stove or heater in which the magazine or feeder is extended to the feed opening of the outer casing, so that there may be no open space across which to project the fuel on feeding the magazine; state whether you mean that in prior constructions there was such a space between the top casing and the magazine feed that if coal was thrown in through such top casing it would not only pass into the magazine feed, but also into the space contained between the exterior surface of such feed and the interior of the casing of the stove, and thus feed the grate surface at two different points, namely, through the magazine feed and also through the space exterior to the magazine feed.

Same objection.

Adjourned by consent to Thursday, December 29th, 1881, at 11 a. m.

155 NEW YORK, *December 29th*, 1881—11 a. m.

Met pursuant to adjournment.

Present: Counsel as before.

Cross-examination of the witness resumed by Mr. TOOD at 11.30 a. m.:

In prior structures there was no space between the top casing and the fuel receptacle. In prior structures coal could not be thrown in through top casing to a fuel receptacle. Coal had to be, in prior structures, projected over a space between the body of the heater and the fuel receptacle about midway between the top of heater and grate into the fuel receptacle, as shown by the Sexton and Bibb & Augee.

X Q. 107. Do you claim that you have done more than insert in a fire-place heater a top feed magazine such as previously existed in outstanding stoves and as it was arranged in outstanding stoves?

Same objection.

A. I do.

X Q. 108. What?

Same objection.

A. Because a stove would have to undergo an entire change in quite or nearly all of its parts to be adapted to a mantel and fire-place; in consequence a magazine could not be taken out of an outstanding stove and placed in a fire-place stove and made a useful or practical article.

X Q. 109. Is there not inserted in your fire-place heater, protruding in the room a sufficient distance to permit of feeding a magazine from the top thereof, a top feed magazine substantially
156 as was shown attached in the cylinders of outstanding stoves at the date of your alleged invention; and do you claim doing anything more to a fire-place heater as it existed at the date of your alleged invention than putting a top feed magazine therein, and feeding such magazine from the top, just as it was fed in outstanding stoves prior to your alleged invention?

A. I do claim making a fire-place heater different from anything that existed at the date of the invention by combining several elements set forth in the patent.

X Q. 110. Did not, at the date of your alleged invention, there exist in public use substantially such a fire-place heater as is shown in your patent, except that there was no magazine feed in the heater and excepting that it was not made in two parts, so as to have what you call in your patent a stationary concave *a*, &c.?

Same objection.

A. There did not exist at the date of the invention substantially a fire-place heater like that of mine.

Answer objected to as not responsive.

X Q. 111. Did there not exist in public use prior and up to the date of your alleged invention a fire-place heater having additional rear heating surfaces attached thereto, such as tubes, pipes, or flues, and the cylinder or main body of such heater, though not containing a top feed magazine, yet projecting sufficiently far in front of the mantel that if such cylinder did contain a magazine within it such magazine could be fed through the top casing of the heater and in front of the mantel?

Same objection.

157 A. No fire-place heater that I know of was ever made with a top casing; consequently a magazine could not be fed through the top casing and in front of the mantel.

X Q. 112. Do you mean to say that at the date of making your alleged invention there did not exist in public use a fire-place heater the cylinder of which protruded into the room and in front of the mantel?

Same objection.

A. I do not.

X Q. 113. And if it did protrude into the room would it not to the extent to which it protruded into the room have a top casing im-

mediately in front of the mantel and over the whole of such protruding part?

Same objection.

A. It would not necessarily; I further say should not, except such case was perforated or fretted.

X Q. 114. Do not the Budd No. 1 and 2 and the American heaters, also the Lester, all of which are exhibits in this case, have cylinders protruding into the room in front of the mantel, and by reason of so protruding into the room have a top casing which would be immediately in front of the mantel, where the heaters are in use?

Same objection, and all reference to the Lester heater objected to, because it is not produced.

A. They would have a top plate.

X Q. 115. Now, does not this top plate of these heaters referred to in X Q. 114 project sufficiently far into the room in front of the mantel that if a hole were cut therein and a suitable cover
158 placed thereon a top magazine feed device could be fed through such opening if such heater contained such a magazine?

Same objection.

Witness states that this question is not possessed of sufficient intelligence and facts to enable him to give an intelligent answer.

X Q. 116. Do not such stoves referred to in X Q. 144 project sufficiently far into the room that they could be fed through the top plate and in front of the mantel into a top magazine feed, assuming a top magazine feed was inserted therein?

Same objection.

Witness repeats his previous statement.

X Q. 117. If there was inserted in any one of the stoves referred to in X Q. 114 a top magazine feed, could not such magazine be conveniently fed through the top plate thereof and in front of the mantel?

Same objection.

A. I don't understand that there is any such a thing as a top magazine feed, and if a magazine were placed in either of those heaters, it would not be like the elements of the combination of my patent No. 104,376.

X Q. 118. Why would it not be as much like the elements of your heaters as is Defendants' Exhibit Burtis & Graff Fire Place Heater, since the latter heater does not extend any more in front of the mantel and does not contain a top plate substantially different from such heaters as are referred to in X Q. 114?

159 A. The Burtiss & Graff heater does extend very considerably more into the room, and it does contain a top plate different from either of the heaters referred to in X Q. 114.

X Q. 119. Did not fire-place heaters exist at the date of your alleged invention, the cylinder of which extended as far in front of the mantel as the Exhibit Burtis & Graff Heater?

A. They did not.

X Q. 120. You found on measurement of the old exhibits now in the case, and the Burtis & Graff exhibit about three inches in favor of the Burtis & Graff, as you state. Is not your last answer based on this examination and measurement?

A. No; that was always my belief about it. I simply made the measurement to verify it, inasmuch as they were present.

Recess taken [at] 1 o'clock till 2 p. m.

After recess, at 2.35.

X Q. 121. Does not the Lester heater, "Defendants' Exhibit Lester No. 1," also the heater shown in the Lester patent, "Defendants' Exhibit No. 12," show a fire-place heater, the body of which projects into the room as far as does the heater "Defendants' Exhibit Burtis & Graff Fire Place Heater?"

Same objection as to Int. 114.

A. I cannot answer as to the Lester heater referred to in the question because it is not present, and from the drawings marked Exhibit No. 12 I cannot determine to what extent it extends beyond the mantel.

160 X Q. 123. Do not figures 1 and 2 of the Lester patent drawing, "Defendants' Exhibit No. 12," show the body of the heater as projecting fully half way into the room, which is considerably more than Defendants' Exhibit Burtis & Graff Fire Place Heater extends into the room; or, in other words, outside of the line of the mantel?

Same objection as to X Q. 114.

A. The figures on Exhibit 12 would indicate that the heater was part of it in front of the mantel. The Burtis & Graff heater shows a like distance in front the mantel.

X Q. 124. Were the magazine feed in your fire-place heater or in the Burtis & Graff heater made with a series of longitudinal openings in it from bottom to top, would such a construction of magazine still be within your invention here in controversy, the magazine feed being otherwise made the same as shown in the Burtis & Graff heaters?

The witness wishes to state from the language of the question he is unable to answer the question.

X Q. 125. If the magazine feed of the Burtis & Graff heater contained a series of longitudinal slots or openings from bottom to top, not large enough, however, to let the coal out of the sides of the magazine, would you consider the fire-place heater so constructed still within your invention here in controversy?

A. I would.

X Q. 126. Did you, at the date of your alleged invention, have knowledge of the outstanding magazine stove patented to one A. Brown on the 12th of February, 1867, numbered 61922, a cut of which I now show you on p. 148 of vol. 3 of the reports of 1867?

Same as last noted objection.

161 A. I had no knowledge of the stove; I think very probably I had of the patent and the cut shown in the report of the Commissioner of Patents on p. 148 for the year 1867; I have no knowledge that such a stove ever was made—that is, like the one shown in this report.

X Q. 127. Do you not know that the defendants in this case, or the firm of which they are successors, have made fire-place heaters containing a magazine feed constructed as shown in this patent No. 69122, with its top part opening directly into the top plate of the heater, just as the top part of the magazine shown in this patent opens directly into the top plate of the stove, and having the opening at the base of the magazine smaller than the superficial area of the fire-pot?

Same objection.

A. I do not.

X Q. 128. Have you ever seen substantially such a magazine in a fire-place heater as is shown in the magazine contained in this drawing of patent No. 69122?

Same objection.

A. I have seen a magazine in the Burtis & Graff fire-place heater with vertical openings all the way around the magazine.

X Q. 129. Since when did you see such a construction of magazine in their fire-place heater?

Same objection.

A. I am unable to state the time precisely, but it is not very long ago.

X Q. 130. Does not the magazine in the drawing of the patent No. 69122 open directly into the top plate of the stove, so that
162 there shall be no open space across which to project the fuel on feeding such magazine?

Same objection.

A. From the drawing I am unable to state what there is at the top of the magazine.

X Q. 131. How do you make out that the magazine feed opening directly into the top plate of the fire-place heater behaves any differently, so far as the operation of the heater is concerned, in use from what it does in the outstanding stove or heater when opening directly into the top casing of the stove, so that the stove or heater can be fed from above?

Same objection.

The witness wishes to state that, owing to the peculiar language in which the question is couched, he cannot answer.

X Q. 132. You have taken 13 minutes in the giving of your last answer; now, why can you not explain what differences in the operation of the magazine feed you see when it is used in different classes of stoves and fire-place heaters?

Same objection.

A. I can't, nor no other person. I simply say they would have to go through a critical examination of operation and construction and location before coming to any conclusion such as asked for in the question.

X Q. 133. What does the top magazine feed accomplish in a fire-place heater which it does not accomplish in an outstanding stove or heater?

A. I do not understand that there is any such a thing as a top magazine feed.

Adjourned by consent to Friday, December 30th, 1881, at 10.30 a. m.

163 NEW YORK, *December 30th*, 1881—11 o'clock a. m.

Met pursuant to adjournment.

Present: Counsel for respective parties.

The cross-examination of Mr. THATCHER continued by A. J. TODD, Esq.:

X Q. 134. I refer to a top magazine feed in the last question in the same sense that your counsel in Q. 24 refers to a "top-feeding magazine," and to no other element, by my language. Now, please answer my last question with this explanation?

A. If I am to understand the language in the question top magazine feed to mean an element—that is, a magazine that is capable of holding coal and that can be fed from the top—then, in order to determine whether they would accomplish the same or not, one could only determine by considering their formation and construction and the circumstances surrounding them and going through a practical demonstration.

X Q. 135. Can you not tell us what you consider you accomplished by your alleged invention of introducing a magazine into a fire-place heater so that such magazine could be fed from the top of the heater; over what such a magazine accomplished in the outstanding stove and the outstanding heater?

A. As I have stated in the previous answer, that nothing but critical examination and practical demonstration would enable me to tell.

X Q. 136. Is this the best answer you can make to the question?

A. It is without, as I have said before, a practical demonstration.

164 X Q. 137. Please state whether the body of the Exhibit Shoo Fly Heater does not extend out in front of the mantel as far as does Defendants' Exhibit Burtis and Graff Fire Place Heater?

A. It does not.

X Q. 138. How much more does the body of one extend out in front of the mantel than the other?

A. By measurement, two and a half inches.

X Q. 139. Does not the Shoo Fly heater extend far enough out in front of the mantel to be conveniently fed from the top into a magazine feed located within the body of the heater and extending up into the top of the heater?

A. The body of the Shoo Fly heater extends out about six inches in front of the mantel, not enough to connect a magazine that can be fed from above except in a limited form, but would permit of an opening that could be connected with a bevel to the top of the magazine. I don't understand what is meant in the question by extending up in the top of the heater in this connection.

X Q. 140. Do you consider the Exhibit Shoo Fly Heater as respects the magazine feed it contains to be within your alleged invention.

A. I do.

X Q. 141. State whether fire-place heaters having a magazine feed entirely in front of the mantel, as shown in Complainants' Exhibit Thatcher's Model, are being introduced into the market at the present day or were ever so introduced; if so, give the names by which such fire-place heaters are known in the market.

A. Fire-place heaters are extensively made that have their magazine feed opening entirely in front of the mantel, and the magazine, I believe, also. I am not familiar with all the trade names of the different make of heaters, and am unable to state.

X Q. 142. Are you at the present time making and selling a fire-place heater having the body and magazine thereof projecting as far in front of the mantel as is shown in Complainants'
165 Exhibit Thatcher's Model?

A. I am not making fire-place heaters at present at all.

X Q. 143. Did you ever make and sell just such a form of heater?

A. I did; many hundreds of them; and there are still quantities of them in use, with two exceptions: the extension of the magazine above the top of the heater in front of the mantel, as shown in the model, and a raised bevel cover to the top of the heater, and no two holes in the top plate.

X Q. 144. Please look at the magazine now shown you and state whether you have ever seen fire-place heaters containing such a magazine, such magazine being fed from the top of the fire-place heater and in front of the mantel and through a hole in the top-plate of such heater.

A. I have seen a magazine with vertical openings all around it in a fire-place heater that could be supplied with coal from above and in front of the mantel, but whether its construction is precisely like this one in other particulars than I have mentioned I do not know.

X Q. 145. If its construction and arrangement in a fire-place heater were as stated in X Q. 144, would the use of such a magazine as is here shown you be within your alleged invention?

Same objection as last noted.

A. It would, combined with the other elements in the patent.

Defendants' counsel offers in evidence the magazine shown the witness, and it is marked Defendants' Exhibit Slotted Magazine, J. A. S., examiner.

Same objection as to last exhibit.

Recess taken at 1.05 till 2 p. m.

166 After recess.

2 O'CLOCK P. M.

Parties present as before.

The witness wishes to add to his answer to X Q. 144 as follows:

On a closer examination of the magazine referred to in X Q. 144, I find it incomplete. The lower portion which attaches to the three projecting ears, as shown on this exhibit at the bottom, which is necessary to its completion, is missing.

X Q. 146. Were not fire-place heaters with a magazine feed standing to the top of the heater so as to be fed through an opening in the top of the heater and in front of the mantel introduced into the United States prior to the date of your patent? I am now referring to the Mott type of heater and other heaters substantially like it made and sold by other manufacturers in the United States before the date of your patent.

Same objection.

A. I have no recollection of seeing the Mott or any other heater or heaters being introduced into the United States possessing the elements and combinations of my patent prior to its issue.

X Q. 147. Who do you refer to as the owners of patent No. 104,376, who have introduced the device embraced in the claims in controversy by the tens of thousands? Give their names and places of business.

A. B. C. Bibb & Company, of Baltimore, Maryland; S. B. Sexton, of same place, and Stuart, Peterson & Co., of Philadelphia, Penn.

X Q. 148. If these three parties here introduced such fire-place heaters, to what extent, comparatively speaking, has the rest of the trade in the United States introduced such heaters?

167 A. To what extent I am unable to say, but at least 999 out of every 1,000 of heaters that have been made containing the elements and combination of the patent of which the persons above referred to are the owners.

X Q. 149. If such three parties made said heaters by the tens of thousands, as you state in answer to Q. 14, would it not be reasonable to say that the remainder of the stove trade in the United States, taken all together, have made them by the million?

A. It would not be reasonable to so state; what I understand by the stove trade in the question is to take in every manufacturer and every man who sells stoves, and the sellers are a thousand to one manufacturer, and only one—probably not one—to every one hundred of manufacturers manufacture fire-place stoves.

X Q. 150. About how many more fire-place heater manufacturers are there in the United States than the three you have named, and about what proportion, comparatively speaking, do they manufacture in the aggregate of these fire-place heaters?

A. I don't know how many manufacturers there are; I think that there are three to five times as many manufactured outside of the owners of the patent.

X Q. 151. State what interest you have with the complainants in this suit?

A. The Thatcher Heating Company are owners of one-quarter interest, of which I am superintendent and vice-president.

X Q. 152. How much stock do you or your family own or control in the Thatcher Heating Company?

A. I am unable to state at the present.

X Q. 153. Why can you not state about the amount of stock so owned?

A. On account of contingencies.

X Q. 154. What are these contingencies, and what amount of stock do they affect.

168 A. The contingencies I cannot name, and the amount of stock I don't know.

X Q. 155. What amount of stock is so owned, without reference to such contingencies—that is, assuming that such contingencies did not exist?

A. I don't wish to spread upon the record here, and it wouldn't be in good confidence so to do as a superintendent of the company, to tell about their business or condition.

X Q. 156. What other outstanding stoves, having a magazine in them and fed through the top plate of the stove, existed at and prior to the date of your alleged invention besides that called the "Morning Glory" stove; can you give the trade name of one or more of them?

A. I can't give the trade name, nor do I know of any, nor is the "Morning Glory" constructed as the question wishes to have it.

X Q. 157. Do you mean to testify that none of the Morning Glory stoves made and sold between the year 1856 and 1857 were not constructed in manner as stated in X Q. 156?

A. I do.

X Q. 158. Could they not have been made and sold in the trade without your having had knowledge of the fact?

A. There might have been, but as far as my acquaintance goes with the production of stoves by Littlefield and from his circulars and illustrations, all of which I believe I have seen, they are not different in the particular to which I have testified to in relation to this Morning Glory stove; that is, as to an immersed magazine or a passage over its top for the products of combustion to the smoke-

pipe. The stoves referred to in question 157 between the years 1856 and 1857 have a gas chamber or a chamber to receive the products of combustion immediately over the magazine from where they pass to the chimney and have no magazine within a cylinder or body.

169 X Q. 150. What do you mean by the statement that such magazine stoves had "no magazine within a cylinder or body?"

A. In my answer I have stated the top of the magazine had a gas chamber and that the magazine was not surrounded by a cylinder or a body, and I make the same answer to the last question, which is exactly the state of facts.

X Q. 160. What was the magazine surrounded by in said outstanding stoves; if not by the cylinder or body of the stove, what then did surround the magazine; nothing, or, in other words, was the magazine a part of the exterior vertical casing or cylinder of the stove?

A. The magazine has no cylinder or body surrounding it, nor has it any connection to any cylinder or body except at the bottom of the combustion chamber and at the top by the gas chamber before referred to. There start from the combustion chamber of the stove, which is at the base of the magazine, four vertical pipes or flues, which rise to the gas chamber, which is above the magazine, which take the products of combustion from the combustion chamber to the gas chamber above the magazine, and thence to the pipe opening. Between each of those vertical flues are ornamental fretted or open work pieces.

X Q. 161. Were all the outstanding magazine top-feeding stoves which you had knowledge of, at the date of the making of your alleged invention, constructed as stated in your last answer?

A. I stated in my last answer how these Littlefield stoves were made between certain dates.

X Q. 162. Question repeated.

A. Not in every particular.

X Q. 163. Have you not seen, as early as the date of making of your alleged invention, outstanding stoves having a magazine contained therein, so arranged to be fed from the top, such

170 magazine being suspended within the cylinder or body of the stove, so that the gases from the combustion chamber could circulate all around and about the exterior surface of such magazine?

A. I have stated heretofore, and I state now, that I have not at the date or prior to the invention seen such stoves as stated in the question.

JOHN M. THATCHER.

Sworn before me—

JOHN A. SHIELDS,
Examiner, &c.

Adjourned to Wednesday, January 4th, 1882, at 11 a. m.

NEW YORK, *January 4th*, 1882—11 o'clock a. m.

Met pursuant to adjournment.

Present: Counsel for respective parties.

Adjourned to Saturday, January 7th, 1882, at 11 o'clock a. m.

NEW YORK, *January 7th*, 1882—11 o'clock a. m.

Met pursuant to adjournment.

Present: B. F. Lee, of counsel for complainants, and A. T. Todd, counsel for defendants.

The witness, John M. Thatcher, examined at the last session, appears and desires to make the following statement or correction:

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In answering the questions about my interest in the patent, it slipped my mind that this patent was included with a number of others in an assignment made in 1879, which gave me the right to prosecute suits in the name of the company for my own benefit, and therefore my interest is larger than would appear from my previous answers.

JOHN M. THATCHER.

Adjourned to Tuesday morning, Jan. 10th, 1882, at 11 o'clock a. m.

HENRY L. BREVOORT, a witness produced on the part of the complainants, being duly sworn, in answer to questions propounded by B. F. LEE, Esq., counsel for complainants, says as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is Henry L. Brevoort; I am 32 years of age; I reside in the city of Brooklyn, and am by occupation a mechanical engineer.

Q. 2. What experience, if any, have you had in the practice of your profession, and have you ever been called upon to testify as an expert in suits relating to patents?

A. I have, since the age of 18, been engaged in mechanical occupations of various kinds, such as building and designing steam-engines, boilers, &c. For the last seven or eight years I have been almost exclusively occupied in examining patents and patented inventions, and during this period I have been called upon very frequently to testify in suits relating to patents before the circuit courts of the United States, both in this and other circuits. I might add that I have frequently been called upon to examine stoves and heating apparatus of various kinds, and have been called upon to testify in suits relating to such apparatus.

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Q. 3. Have you examined, and do you understand, United States letters patent granted to John M. Thatcher, dated June 14th, 1870? And, if so, please state what you find to be the invention described therein and specially referred to in the first and second claims thereof.

Objected to as incompetent, as a reopening of the *prima facie* case. The construction of the claim of the complainants' patent should

have been given in the opening proofs. This objection is considered as repeated to all the subsequent questions of this deposition, so far as the construction of the claims enter as an element therein.

A. I have examined, and think that I understand, the patent and the invention of each of the claims referred to in the question. The patent of Thatcher, No. 104,276, relates to an improvement in fire-place heaters, or to that class of heating devices which are to be set into the fire-place of a room, and which are to heat the said room in which they are located by direct radiation, and which are likewise to heat air, which air, after being heated, is to be conveyed by the proper tubes or passages to one or more rooms above the one in which is placed the heater. To make a successful and efficient fire-place heater, which will simultaneously heat the room in which it is located and the room or rooms above, it is necessary that the front of the heater should protrude out into the room in which it
173 is set; that the outer plate of the heater should, on its inside, be directly acted upon by the gases arising from the combustion of the coal; that the back of the heater, or that portion which is within the fire-place, should be arranged so as to furnish a large heating surface in contact with which the air to heat the room or rooms above should be brought on its passage upwards. It is also necessary, if a steady and uniform heat is desired, that the apparatus should be provided with a magazine containing unignited fuel, which unignited fuel will, as the coal is consumed in the fire-pot, gradually feed itself by gravity into said fire-pot, thus keeping up a steady and even fire, and consequently a continuous and uniform supply of heat. The magazine employed must have its entrance from the outside direct, so that coal in the said magazine will not become ignited by reason of a draft upwards through the magazine into the flue of the chimney, and also for the purpose of preventing the hot products of combustion from enveloping the magazine. All these features of advantage which are necessary for a successful and efficient fire-place heater of to-day are found in the heater described in the Thatcher patent, in which there is a heater described having a protuberant front or body kept in a highly heated condition by the direct action of the products of combustion upon its inner surface. The heater is also arranged with a large heating surface at the rear and within the fire-place, against which heating surface the air to be supplied to the rooms above is passed. The Thatcher device also has a magazine for containing unburnt coal, which coal is fed into the fire-pot containing the burning fuel. This magazine is so arranged that the products of combustion cannot envelop it, its feed or supply opening being made through the outer wall of the protuberant portion of the heater.

174 The first claim of the Thatcher patent refers to a base-burning fire-place stove, in which certain elements are combined, which elements are as follows:

First. A cylinder or body projecting outward from a mantel or frame. By this I understand that such a cylinder is referred to as will permit the air of the room to circulate in contact with its ex-

terior surface, while its interior surface directly confines and is acted upon by the products of combustion.

Second. By mantel or frame I understand to be meant the front portion of the fire-place, or the frame which is used to make a tight joint between the heater and the marble mantel, and which mantel or frame separates the protuberant front portion of the heater or stove part, as I may call it, which heats the lower room in which it is placed, from the back or furnace-like portion of the heater, the office of the latter part being to heat the air which is to go to the room or rooms above for the purpose of warming them.

Third. A fuel magazine or feeder within the cylinder. By this I understand that such a magazine is referred to as will contain, when the apparatus is in operation, a supply of unburnt and unignited fuel, which will be fed into the central part of the fire-pot, as occasion requires, automatically, thus keeping the fire uniform and steady.

Fourth. An opening through which the said magazine can be fed from above. By this I understand that the magazine is to be brought up to the top of the apparatus, so that the coal can be thrown into it directly from above through the said opening, and thus pass through the magazine on its way to the fire.

Fifth. The furnace-like back portion behind the mantel or frame that is essential to a fire-place stove or heater.

175 The second claim also refers to an improvement in fire-place stoves or heaters, and is, like the first claim, I think, for a combination of parts.

The first, second, third, and fifth elements of the first claim are, I understand, elements of the combination of the second claim, the said second claim differing from the first claim merely in that the magazine need not extend to the top of the outer casing, as in the first claim; but in the second claim the magazine is to be extended to the feed opening of the outer casing, whether said feed opening be arranged in the top of the outer casing or in the side or front thereof. By the expression in the claim "the magazine is extended to the feed opening of the outer casing," and the like expression in the specification "extending the feeder or magazine to the feed-hole," is meant a magazine the feed opening of which is not within the combustion chamber, in contradistinction to those fire-place heaters which, I understand, were old, and in which the coal was passed through the upper part of the combustion chamber on its way to the fuel receptacle which was immersed in the products of combustion

Q. 4. Have you read, and do you understand, the deposition of William E. Hagan, taken in this cause, and the following defendants' exhibits referred to by the said Hagan in his deposition:

"Defendants' Exhibit 19, Nott Reissue." "Defendants' Exhibit 20, Part of Nott Reissue Drawings." "Defendants' Exhibit 21," being the English patent of Coad & Coad of 1852. "Defendants' Exhibit 22," being Nott reissue, September 17th, 1832. "Defendants' Exhibit 9," being the reissued patent of Roney, dated Oct. 8th, 1872. "Defendants' Exhibit 13," being letters patent granted

to W. C. Durant, dated July 23d, 1867. "Defendants' Exhibit No. 17," being the English patent of Harper & Walker for the
176 year 1839. "Defendants' Exhibit Treadwell Patent," the heater which is in evidence under the name of the "American," and the heater marked "Exhibit Budd No. 2."

A. I have examined the various exhibits referred to in the question, and I understand that which they show and describe, and also the two structures referred to. I do not know which Treadwell patent Mr. Hagan refers to, as two Treadwell exhibits have been put in this case by the defendants, one marked "Defendants' Exhibit No. 5," and the other marked "Defendants' Exhibit No. 11." I have examined, however, both of these exhibits. The exhibits referred to in the question are, I understand, all that are relied upon by the defendants' expert for the defence of this case. I have also read with great care the deposition of the witness Hagan, and I understand that which is referred to therein.

Q. 5. You have already stated in a previous part of this deposition that you have read the patent of John M. Thatcher, No. 104,375, and you have also stated that you understand the inventions which are referred to in the first and second claims of the said Thatcher patent. Will you now please state whether, in your opinion, any of the exhibits or structures referred to by the witness Hagan do or do not show the inventions of Thatcher as referred to in the first or second claims of his patent No. 104,376? In answering this question please give your reasons fully for any statement you may make.

A. I will first refer to the various printed exhibits referred to by Hagan, and compare what is shown by them with the inventions of Thatcher, and I will lastly compare the structures mentioned by Mr. Hagan with the inventions of Thatcher. The earliest patent referred to by the witness Hagan is Defendants' Exhibit No. 19, being the reissued letters patent granted to Nott Oct. 17th,
177 1835. This patent contains a large number of drawings showing stoves of various kinds, and is to be considered in connection with Defendants' Exhibit 20, which is an enlarged view of one of the sheets of drawings forming part of the Nott reissue, showing Figs. 15 to 20. Mr. Hagan says in his deposition as follows, referring to the Nott reissue:

"On examining figure 17 of the drawing, a fire-place stove or heater is illustrated, and at figure 20 a vertical section of a stove containing a fuel magazine within the stove body, and constructed to be supplied with fuel from an opening in the top of the magazine."

Mr. Hagan also says, referring to the Thatcher patent and the Nott reissue, as follows:

"If the invention claimed in Exhibit B and therein described be considered broad enough to cover elements of stove structure broadly and without regard to specific application, I do find the elements named in the Thatcher patent to occur in the Nott reissue and as shown in figure 20 of the drawings attached to the same, in which there is shown a stove body or cylinder containing a maga-

zine or feeder within the cylinder or body and an opening through which the said cylinder can be fed from above."

I cannot find anywhere in the Nott reissue a statement that the things shown at figures 17 or 20 are to be fire-place heaters in the sense of the Thatcher patent—that is to say, a heater adapted for simultaneously heating the room in which it stands and rooms or a room above. Indeed, the Nott patent says nothing whatsoever about heating any apartment other than the one in which the heater is located. Consequently I think that Mr. Hagan is wrong in classifying that which is shown in the Nott reissue at figure 17 as a fire-place heater in the sense of the Thatcher patent, which latter
178 patent describes a mechanism constructed for heating simultaneously the room in which it stands and rooms above, being, in fact, a stove in front where it projects into the room and a furnace behind where it sets within the fire-place. The protuberant front of the Thatcher heater is relied upon to radiate sufficient heat to warm the room in which it stands, while the large, furnace-like heating surface of the portion within the fire-place is relied upon to heat the air which is to warm the apartments above. That which is shown in the Nott patent at Figs. 17 and 20, so far as can ascertained, are two stoves, one of which stoves is arranged to be fed from above through the appropriate opening, the fuel falling upon the grate below. This magazine shown in Fig. 20 is not arranged, as is the magazine in the Thatcher patent, to supply unburnt fuel to the central part of a fire-pot larger in diameter than the lower end of the magazine, but, on the contrary, in the Nott device the magazine and the fire-pot on three of the sides are formed by the same wall, the magazine merely being an upward extension of the fire-pot. The products of combustion in the Nott device are not allowed to come in contact with the outer wall of the stove, but pass only backwards over a bridge wall, then downwards, and then upwards on their way to the chimney. Thus the front outer shell or casing of the heater is never directly acted upon by the hot gases, and consequently the room must be heated, I suppose, with such a device, if placed in a fire-place, by allowing the air heated by the rear of the heater to come out into the room, and the direct radiation of heat from the front of the heater is not, apparently, relied upon for heating the room in which the device stands. This fact is made evident by the drawing of Fig. 20, which shows a body of cold air between the fire-pot and that which forms the front of the heater and
179 fire-brick on each side, thus proving that the said device shown in Fig. 20 was not intended to heat rooms above and below simultaneously, for to do this work successfully the front of the heater must be hot enough to heat the lower room while the back part of the heater must be hot enough to heat the air for the upper rooms. It must be borne in mind that Fig. 20 is not a cross-section of Fig. 17 of the Nott reissue, and consequently it is impossible to tell precisely how the front of Fig. 20 is to be made. Figs. 18 and 19 are cross-sections of Fig. 17, and show no magazine or "chamber of preparation" extending to the top of the stove.

Considering now the first claim of the Thatcher patent I find the first element there referred to to be a cylinder or body projecting outward from the mantel or frame. The Nott reissue does not show such a construction—that is to say, it has not got a cylinder or body projecting outwards from the mantel or frame upon the inside of which the products of combustion impinge and upon the outside of which the air to be heated strikes, thus making the projecting body or cylinder capable of heating the room in which the device stands. On the contrary, the Nott device has an air space intervening between its outer casing and the fire, or, rather, between the outer casing and the chamber within which the fire is made. Above this double casing it is true that a single plate is used in the machine shown in Fig. 20, but as unconsumed fuel lies within this plate no heat is practically derived therefrom for heating the room in which the device stands. For the above reasons I am clearly of the opinion that the Nott device does not possess the first element of the first claim of the Thatcher patent, to wit, a cylinder or body projecting outward from the mantel or frame.

The second element of the first claim of the Thatcher pat-
180 ent is a mantel or frame. In the Nott reissues I do not find shown any mantel or frame for making a tight joint between the heater and the marble mantel, and I do not find it shown or stated in the Nott reissue that the devices there shown are to be set into fire-places at all. For the above reasons, I am clearly of the opinion that the Nott patent does not show the second element of the first claim of the Thatcher patent.

The third element of the first claim of the Thatcher patent is a fuel magazine or feeder within the cylinder. In the Nott reissue I do not find such a device, but, on the contrary, I find that in Fig. 20 the "chamber of preparation," or receptacle for burnt coal, is not within a cylinder or body, which is the equivalent of Thatcher's, but that the so-called magazine and fire-pot are practically one chamber or box, thus precluding the possibility of heating the outermost casing of the device by the direct action of the products of combustion. It is essential, I think, of any successful fire-place heater that the magazine, fire-pot, and body should be so arranged in relation one to the other as to allow the products of combustion to impinge against the inner surface of the outer body or case. With the Nott device, or with any device constructed with the walls of the so-called magazine, forming on three sides of a square fire-pot merely a continuation of the said fire-pot, and with a back draft, it is impossible to heat the outer body; so that, if the device in Fig. 20 was placed within a fire-place with a closed mantel or frame, sufficient heat would not be radiated from the front alone to heat the room in which the device stood. For these reasons I do not think that the said Nott reissue, at Fig. 20, shows the third element of the first claim of the Thatcher patent, to wit, a fuel magazine or feeder within a cylinder or outer body.

181 The fourth element of the first claim of the Thatcher patent is an opening through which the said magazine can be fed from above. Now, undoubtedly, the Nott magazine, such as it was,

could be fed from above through an opening, but the magazine is not the magazine of the Thatcher patent—is not a magazine projecting into the products of combustion, and is not, in any sense, the equivalent of the Thatcher magazine. Assuming that the fourth element of the first claim is limited to an opening arranged to conduct the fuel into a magazine which is the equivalent of Thatcher's magazine, I do not think that with such an understanding of the claim the Nott reissue shows the fourth element of the first claim of the Thatcher patent.

The fifth element of the first claim is obviously not shown in the Nott structure.

Referring now to the second claim of the Thatcher patent, I find that the Nott reissue does not show any one of the elements thereof, for the reasons given in relation to the first claim; the difference between the first and second claim is that the first is more restricted than the second, in that it requires that the feed opening of the first claim shall be one through which the magazine can be fed from above, while in the second claim the feed opening might extend to the front or sides of the casing or heater body projecting into the room.

The patent to Nott, dated Sept. 17th, 1832, Defendants' Exhibit No. 22, seems to be the reissue of a patent dated March 23d, 1826. I do not find that Mr. Hagan has referred to this patent, and I do not find anything in it which affects the inventions claimed in the Thatcher patent one way or the other.

The next patent to which I shall refer is marked "Defendants' Exhibit No. 17," and is an English patent No. 8065, granted in the year 1839, to Harper & Walker. This patent shows and
182 describes merely a stove to be placed out in an apartment, which stove has in it a magazine for feeding the fire in the fire-pot below. It is in no sense a fire-place heater having a portion set within a mantel and a portion extending out into the room, and it is not capable of being so used with any fire-place such as I have ever seen, and it seems to me clear that this exhibit does not show the invention referred to in either one of the claims of the Thatcher patent. There are many differences between the Harper & Walker outstanding stove and the Thatcher device, but they are so evidently for substantially different things that it will be needless here to refer to the numerous distinctions in detail.

The next patent to which I will refer is the English letters patent to Coad & Coad, No. 738, for the year 1852.

This patent, though put in evidence by the defendants during Mr. Hagan's deposition, has not been referred to by Mr. Hagan. This patent does not show anything but a range adapted for cooking, and to be set into the chimney breast as is any ordinary range used in the kitchen of a house. No arrangements are shown for heating a room above, and indeed the Coad & Coad devices are incapable of serving the useful purposes of the Thatcher device, so far as that device is serviceable for heating the lower room continuously, or, in other words, the room in which the heater stands. This patent does not show the invention of either the first or second claims of the

Thatcher patent, and it is unnecessary to consider in detail all the differences which exist between the structures of Coad & Coad and the Thatcher structure. I will next refer to the reissued letters patent of B. T. Roney, "Defendants' Exhibit No. 9." This patent shows a base-burning stove and not a fire-place heater, pro-
183 vided with a fire-pot, and a magazine passing from the top of the stove downwards to a point slightly above the top of the fire-pot. This magazine is fed from the top. The stove of the Roney patent is what is commonly known as an outstanding stove—that is to say, the stove stands upon the floor of the room surrounded entirely by the air of the room, and does not stand within the fire-place. The Roney stove is not intended to heat a room above, and is not so arranged as to be capable of heating the room in which it stands as well as rooms above. Neither is the Roney stove capable of being set in a fire-place in such a way as to warm two or more rooms. It is unnecessary to further compare this Roney structure with the Thatcher device, for the reason that it evidently does not possess the combinations of either the first or second claims of the Thatcher patent.

The next patent which I shall refer to is the one granted to W. C. Durant, "Defendants' Exhibit No. 13." This patent shows practically the same structure as the Roney patent, with the exception that the products of combustion do not rise upward directly around the magazine, but the air of the room is brought in contact with the outside surface of the magazine, and the products of combustion pass upwards to the chimney through a separate passage-way. The Durant stove is not a fire-place heater, but is an outstanding stove arranged to heat only the room in which it stands. It is not adapted to be placed within an ordinary fire-place, and could not be so placed if desired. This stove, like the Roney structure, is not a stove in front and a furnace behind, as is the Thatcher structure, and which arrangement is essential for a successful fire-place heater. It is unnecessary for me to consider at length the Durant stove, as it does not show the combination of either the first or the second claims of the Thatcher patent, both of which claims only
184 refer to fire-place heaters, which are substantially different from any outstanding stove with which I am acquainted.

Mr. Hagan refers to the "Treadwell patent." There is a Treadwell & Hailes patent, and there is a W. B. Treadwell drawing in evidence, and I do not know which of these exhibits he means. However, I understand the structures described in both exhibits, and neither of them are for anything but an outstanding stove, and neither of them are fire-place heaters, or are devises intended to be set in a fire-place. There are many other differences between the Treadwell and the Treadwell & Hailes devices, and the devices of Thatcher, but it is useless here to go into these differences, for the reason that neither of the patents referred to show the combinations of the first or second claim of the Thatcher patent in suit.

The heater which Mr. Hagan refers to, and which is called "The American Heater," is the one, I understand, having upon it on the top plate the name B. McCann & Co., 273 Fulton avenue, Brooklyn,

N. Y. This heater is a fire-place heater having a protuberant front and a furnace-like back, and is arranged to heat the room in which it stands, and also the room above. This heater has no magazine in it, but the fresh coal has to be put upon the fire by hand whenever the fire needs replenishing. This heater is distinguished from the device described in the Thatcher patent in that it has no magazine of that kind. The American heater has an air space between the top of the heater proper and the upper plate, which is exposed to view when the heater is set, through which air space heated air can pass when it is not desired to heat the room above. Mr. Hagan also refers to the heater marked "Budd No. 2," which is the one, I understand, upon the top plate of which appears the words "Jackson & Son, 246 Front street, N. Y." This exhibit is a fire-
185 place heater, but like the American heater has no magazine of any kind; and, like the American heater, whenever the fire needs replenishing, fresh coal must be put upon it by hand. This heater, also, like the American heater, has an air space between the top of the heater proper and the top plate which is exposed to view, through which the air can be passed to the room when the heater is not warming the rooms above. Neither the Budd nor the American heater show the invention of Thatcher, as expressed in the first or second claims of his patent, for the reason that neither of the said heaters are provided with a magazine within which fresh coal can be placed, and which coal will, as the fire burns, be automatically fed from the magazine into the fire-pot of the heater, thus ensuring a steady fire and enabling the device to be kept in operation for long periods of time without needing an attendant. This is one of the special features of Thatcher's fire-place heater, that it possesses a magazine for containing unignited fuel held in readiness to be automatically fed upon the fire when necessary, thus ensuring the uniform action of the device, both as a stove to heat the room below and a furnace to heat the room or rooms above. For the above reasons, I am clearly of the opinion that neither the American heater nor the Budd heater show the inventions of Thatcher as expressed in the first and second claims of his patent.

Q. 6. Have you examined, and do you understand the following defendants' exhibits, which comprise all the patents introduced by the defendants not referred to in the deposition of said Hagan:

No. 1, Sexton's patent, April 19th, 1859; No. 2, drawing of Cantelo's patent, June 28th, 1859; No. 3, Bibb & Augee, April 30th, 1861; No. 5, Treadwell & Hailes' patent, May 7th, 1861; No. 6, Spear's patent, July 30th, 1861; No. 7, Granger's patent,
186 September 24th, 1861; No. 8, Roney's patent, September 24th, 1861; No. 10, drawing of Sexton's patent, April 4th, 1865; No. 11, drawing of Treadwell's patent, May 23d, 1866; No. 12, Lester's patent, Jan. 29th, 1867; No. 16, Nott English patent, No. 6026, 1830; No. 18, English patent to Walker, No. 9440, 1842; No. 19, Nott's patent, October 24th, 1832; No. 21, Sheppard's design patent, Feb. 24, 1862; No. 22, Nott's reissue, Sept. 17th, 1832. State also whether you have read the evidence of the witnesses, Klotz, Hutch-

inson, and Richards, in reference to the structures described in said Exhibits Nos. 1 and 3.

A. I have examined the patents, so far as I understand that the actual exhibits have been introduced in evidence in this case, and I think that I understand what is shown in the various exhibits which I have examined, and I have also read and understand the testimony referred to, and the structures exhibited by the said testimony.

Q. 7. Please state whether, in your opinion, any of the exhibits referred to in the last question do or do not show the inventions of Thatcher referred to in the first or second claims of his patent No. 104,376, and in answering the question please give your reasons fully for any statement you may make.

A. The first patent to which I shall refer is the Sexton patent of April 19th, 1859, "Defendants' Exhibit No. 1." This patent shows a fire-place heater arranged to be set into a fire-place, and intended to heat the room in which it is set, as well as a room or rooms above. The structure shown in the patent, though a fire-place heater, does not have a protuberant front projecting into the room in front of the mantel or frame to any great extent—perhaps an inch or so; while the heater described in the Thatcher patent is about half in the room and half in the fire-place. The Sexton heater is shown with
187 substantial accuracy by the "Exhibit Sexton's Fire Place Heater" introduced in evidence by the complainants. This Sexton heater, both as shown in the patent and as shown in the heater in evidence, has a grate and fire-pot, and above said grate and within the said fire-pot is a cylinder always open at the bottom or towards the grate, and having at the top a cover which is removable, and access to which can be had by opening a door leading into the upper part of the combustion chamber, through which door also could be removed the cover used to close the top of the cylinder or fuel chamber arranged within the fire-pot. This cylinder is referred to in Sexton's patent as "the covered fuel chamber H," and by this name I shall refer to the part. This fuel chamber is, in effect, hung or immersed in the hot products of combustion, both on its sides and at its top, and thus that which is contained within the fuel chamber, if combustible, will be ignited, and this is particularly true when it is considered that air can pass up through the fuel in the fuel chamber out past the cover of said fuel chamber, and then into the chimney unless the cover fits with great tightness, which the heat would probably prevent. After passing around the fuel chamber or through it the air or products of combustion are permitted to pass either by a short route to the chimney or else pass down one of the side pipes shown on the left-hand side of all the figures of the patent, then horizontally under or around the ash-pit, and then up through the pipe shown on the right-hand side of all the figures, and thence to the chimney direct. When the device was in operation, and it was desired to feed the fire, the door into the upper part of the combustion chamber was opened; the cover was removed from the fuel chamber; the fuel was thrown into the top of the fuel chamber, where it remained,

if the apparatus was well supplied with coal, but out of
188 which it fell if the fire was low. Now, as I understand the operation of the device, sufficient coal was always kept in the heater while burning to more or less fill the fuel chamber, and the fuel contained in the fuel chamber was either ignited or, if just put in, would become ignited rapidly; thus, when the heater was doing its maximum of work the fuel chamber and the fire-pot both contained fully ignited fuel. The testimony to which I am referred in the question, and which relates to the Sexton heater, describes, as I understand said testimony, this mode of operation. When I compare that which is shown in the Sexton patent with the inventions of Thatcher, as expressed in the first and second claims, I find that the Sexton heater has not got a protuberant stove body projecting out into the room, which is an essential feature of construction of the Thatcher device, as referred to in the first and second claims of his patent; the Sexton device is set, practically, all in the fire-place, and thus is not as efficient a device as Thatcher's.

In the Thatcher device there is a magazine constructed to contain unignited fuel held in the magazine in readiness to fall by gravity into the fire-pot, thus insuring, by the use of such magazine, a proper supply of coal to keep the fire going for a considerable length of time; and this magazine of Thatcher, as referred to in his first claim, must have its supply opening at the top of the heater and through the outer case, while in both the first and second claims the magazine is to extend to the outer casing of the heater, either at the top or side thereof. In the Sexton device, either as shown in the patent or as shown in "Complainants' Exhibit Sexton Fire Place Heater," there is no such magazine at all, and nothing which is the equivalent of the magazine referred to in the first and second claims of the Thatcher patent in suit. The fuel chamber of Sexton
189 contains ignited fuel only, except when freshly fed, and then said fuel remains unignited but for a short space of time. The magazine of Thatcher, on the other hand, contains unignited fuel, and which fuel will remain unignited until by gravity it has been fed to the fire. The fuel chamber of Sexton can only be fed by passing the coal through a portion of the combustion chamber, while the magazine of Thatcher is fed directly, and not through the combustion chamber or any like place. The fuel chamber of Sexton is immersed in the products of combustion, and is entirely within the combustion chamber. The magazine of Thatcher, on the other hand, is not surrounded at all parts by the products of combustion, but its vertical walls alone are brought in contact with the products of combustion, and it is not wholly within the combustion chamber, but, on the other hand, merely projects into said chamber, its feed opening being through the outer casing of the heater, in contradistinction to being located withing the combustion chamber.

In the Thatcher patent, and in the first and second claims thereof, a projecting cylinder or body is referred to which is to project outward from the mantel; the device shown in the Sexton patent has not got a projecting cylinder or body projecting outward into the room, as has the Thatcher device.

In the first and second claims of the Thatcher patent a fuel magazine or feeder is referred to which is to open directly into the room. In the Sexton device there is no fuel magazine or feeder for holding unignited coal, and the fuel chamber, which is shown in the Sexton patent, does not extend to such a point in relation to the casing as to enable it to be fed from the room instead of through the combustion chamber. For these reasons I am clearly of the opinion that the Sexton device, either as shown in the patent or as existing in
190 the structure put in evidence by the complainants, does not show or contain the invention of either the first or second claim of the Thatcher patent No. 104,376.

The next exhibit to which I am referred in the question is the drawing of William J. Cantelo's patent No. 24539, dated June 28th, 1859, being "Defendants' Exhibit No. 2." This drawing shows an outstanding stove not arranged to be set within a fire-place, and incapable of serving the useful purposes of a fire-place heater. The Cantelo stove, apparently, has a magazine, but the magazine is immersed in the products of combustion, and the said magazine does not open directly into the room, for the reason that the Cantelo drawing shows an outstanding stove and not a fire-place heater, and for the reason that the Cantelo drawing does not show a magazine which is the equivalent of the magazine of Thatcher, which is referred to both in the first and second claims of the Thatcher patent, which claims relate solely to fire-place heaters. I am clearly of the opinion that the said Cantelo patent does not show the invention of either the first or second claim of the Thatcher patent No. 104,376.

The next patent to which I am referred in the question is the one granted to Bibb & Augee, No. 32176, dated April 30th, 1861, being "Defendants' Exhibit No. 3." This patent describes a fire-place heater substantially like in every respect the heater shown in the Sexton patent, with the exception that the Bibb & Augee heater has a cylinder or body projecting outward from the mantel or frame—or, in other words, has what is commonly called a protuberant front. I have carefully examined "Complainants' Exhibit Bibb & Augee Fire Place Heater," and I have read the testimony given in relation thereto, which testimony is referred to in the present question. This exhibit is a substantially correct
191 representation of the thing shown in the Bibb & Augee patent. In the patent and in the exhibit I find the same fuel chamber bearing the same relation to the surrounding casing, and which fuel chamber is fed through the combustion chamber identically as in the Sexton patent. In the Bibb & Augee patent the fuel chamber, as it is called in the Sexton patent, is called "a pot, Q." The Bibb & Augee patent distinctly describes the operation of the pot Q, and states as follows:

"When the fire is to be started the pot cover R is removed so as to cause the draught to be direct. When the fire is fairly burning the cover R is replaced. The flames will be deflected by the closed top of the pot, and thus be caused to pass down the inside and up the outside of the pot, and up around the peripheric hollow space P, as indicated by the arrows U U."

From this description it is perfectly clear how said pot operates, and from this description it is evident that the fuel contained within the pot is to be ignited fuel and not green coal or unignited fuel. The description also shows that when the fire is to be started a direct draft is to pass through the pot to the combustion chamber, thus making it absolutely essential that the said pot should be entirely immersed in the products of combustion—or, in other words, that the pot should be completely within the combustion chamber, so that the products of combustion may pass entirely around and over the pot. This pot of Bibb & Augee and the fuel chamber of Sexton are neither of them magazines of the kind forming an element in the combinations of the Thatcher patent—that is to say, neither of them are made for the purpose of containing unignited fuel which is to be contained in the magazine in its unignited condition, and to fall by gravity upon the fire when the said fire may need replenishing—and likewise neither in the case of Sexton or in the case
192 of Bibb & Augee does the fuel chamber of the one or the pot of the other come to the outer casing of the stove or extend to the top thereof so that fuel can be introduced directly from the room; but, on the other hand, in both of these old patents the fuel which is to go into the fuel chamber or pot has to be passed from the room into the combustion chamber and from the combustion chamber into the said fuel chamber or pot.

In both the claims of the Thatcher patent a magazine for containing unignited fuel is referred to, and in neither the Bibb & Augee patent or the Bibb & Augee structure, which is in evidence, is there such a magazine, and consequently I am clearly of the opinion that neither the Bibb & Augee patent nor the Bibb & Augee structure shows the invention referred to either in the first or second claim of the Thatcher patent No. 104,376.

In fact I understand the Thatcher patent to distinctly disclaim the structure of Bibb & Augee where it says: "Fire-place stoves or heaters with protuberant cylinders and feeders or magazines were known prior to the date of my invention:" and where it says: "It has been the practice to so contruct base-burning fire-place stoves or heaters that the fuel had to be introduced into the feeder or magazine through a doorway in front; hence the magazine was of a very limited capacity." My examination of the state of the art has shown that the Bibb & Augee and Sexton heaters are the only structures to which either of these statements can apply.

The next patent to which my attention is called is the one granted to Treadwell & Hailes, dated May 7th, 1861, No. 32257, Exhibit No. 5. This patent I have before referred to in a previous answer, and it is unnecessary to again consider it. The device shown in the patent is an outstanding stove and not a fire-place heater, and
193 for this reason, as well as for many others, the said patent, "Defendants' Exhibit No. 5," is clearly for something other than the invention of Thatcher, as expressed in either the first or second claim of his patent.

The next patent to which my attention is called is the one granted to J. Spear, No. 32928, dated July 30th, 1861, being "Defendants'

Exhibit No. 6." This patent describes an improvement in top plates for fire-board stoves the improvement consisting in a register placed in the top plate of the stove so that the air of the room may pass into the chimney for the purpose of ventilating the room. The patent does not show or describe a fire-place heater. The patent does not show or refer to a magazine or any equivalent therefor, and consequently it does not show Thatcher's inventions, as claimed in the first and second claims of his patent No. 104,376.

The next patent to which I am referred is the one granted to R. D. Granger, No. 33345, and dated September 24th, 1861. This patent describes an outstanding stove having a magazine not inclosed within a cylinder or body, the walls of the magazine and fire-pot being continuous and a portion of such walls forming the outer wall of the stove. This stove is not a fire-place heater, and is not arranged to be fitted within a fire-pace of any kind, and it has not a magazine, fire-pot, and cylinder, or body, as has the Thatcher fire-place heater. Many other differences also exist between this Granger stove, described in "Defendants' Exhibit No. 7," and the Thatcher inventions; but such differences as I have pointed out are, I think, sufficient to clearly distinguish the Granger device from the Thatcher device; and I am of the opinion that the said Granger device does not contain or show the Thatcher invention as expressed in either of his claims.

194 I am also referred to the Roney patent, dated September 24th, 1861, No. 33367, "Defendants' Exhibit No. 8." This patent describes the same thing exactly as is described in "Defendants' Exhibit No. 9," which is the reissue of "Defendants' Exhibit No. 8." I have already, in a previous part of this deposition, given my reasons why "Defendants' Exhibit No. 9" did not show the Thatcher invention, and these same reasons are as controlling when "Defendants' Exhibit No. 8" is considered as they were when "Defendants' Exhibit No. 9" was considered. The Roney structure is merely an outstanding stove, having a magazine in it, and is incapable of serving the useful purpose of a fire-place heater, and consequently the said Roney exhibit does not show the Thatcher invention as expressed in either the first or second claim of his patent No. 104,376.

The next exhibit to which I am referred is the drawing of S. B. Sexton, No. 47136, dated April 4th, 1865, which is maked "Defendants' Exhibit 10." This drawing apparently shows an outstanding stove, and it does not show a fire-place heater or anything which would act as such. It has a peculiar arrangement of magazine and air passages. As I have before said, no form of outstanding stove, in my opinion, meets the inventions claimed in the patent of Thatcher, and this exhibit, like the other outstanding stoves referred to, is, in my opinion, substantially a different thing from that which is claimed as the invention of Thatcher in the first and second claims of his patent No. 104,376.

The next exhibit in order is the drawing of W. G. Treadwell, dated May 23d, 1865, No. 47881. This drawing, like the one last referred to, shows an outstanding stove having a magazine feed, and

does not show a fire-place heater or an apparatus which could be adapted to take the place of such a device. For these reasons, as in the case of the numerous outstanding stoves previously re-
195 ferred to, I do not think that "Defendants' Exhibit No. 11," being the Treadwell drawing, shows the invention of Thatcher as expressed in the first and second claims of his patent No. 104,376. I have elsewhere spoken of this exhibit.

The next exhibit to which my attention is called is the patent granted to W. C. Lester, dated January 29th, 1867, No. 61623. This patent describes a fire-place heater having a protuberant front or body, but which heater is not provided with any magazine, the fuel being introduced directly into the fire-pot through the combustion chamber. As both claims of the Thatcher patent specifically refer to a magazine I do not think the inventions referred to in the said claim can be found in any structure which does not possess a magazine for holding unignited coal. For these reasons I do not think that "Defendants' Exhibit 12," being the Lester patent, contains or shows the inventions referred to in the first and second claims of the Thatcher patent No. 104,376.

The next exhibit to which my attention is called is "Defendants' Exhibit No. 16," being the Nott English patent No. 6026 for the year 1830. This patent shows various apparatus for burning coal. On sheet 1 of the drawings is shown what is called a furnace, but what, in reality, appears to be a peculiar form of stove with a magazine connected with it, the said magazine and fire-pot being continuous. The products of combustion pass up a flue, apparently placed at some distance from the wall. This device is not a fire-place heater, but is merely an outstanding stove or furnace, having a magazine substantially unlike the magazine of Thatcher, and being generally, in its arrangement and construction, totally unfitted to perform any of the useful functions of the Thatcher device.

For the above reasons I do not think that "Defendants' Ex-
196 hibit 16" shows the invention of the first or second claim of the Thatcher patent No. 104,376.

The next exhibit to which my attention is called is "Defendants' Exhibit No. 18," being the English patent to Thomas Walker, No. 9440, dated August 9th, 1842. This exhibit shows two forms of outstanding stoves, neither of which forms are adapted for the purposes of a fire-place heater. Both forms of stove shown have, it is true, magazines, but in neither case do the stoves shown in this English patent suggest to any one the idea of placing said stoves within a fire-place and remodeling them so that they can be so placed; but, on the other hand, this patent merely shows to the person reading it how to combine a magazine with an outstanding stove, which combination had been made long before the date of the Thatcher patent.

For these reasons I am clearly of the opinion that the said Walker patent does not show the invention claimed in the first or second claims of the Thatcher patent, No. 104,376.

I do not find among the exhibits "Defendants' Exhibit 19, Nott Patent of October 24th, 1832," or any exhibit marked "Sheppard's

Design Patent, Feb. 24th, 1866," and I am informed that these exhibits have never actually been put in.

The last patent to which the question refers me is "Defendants' Exhibit No. 22," which is the Nott issue, dated September 17th, 1832, being the reissue of a patent dated March 23d, 1826. The reissue describes a rotary grate, and it has nothing to do with fire-place heaters, magazine stoves, or the like, and consequently it does not show either of the inventions referred to in the first or second claims of the Thatcher patent, No. 104,376.

Q. 8. Have you examined and do you understand the following defendants' exhibits: "Defendant's Exhibit Mott No. 2," "Defendants' Exhibit Lesster No. 1," "Defendants' Exhibit Brown No. 1," "Defendants' Exhibit Brown No. 2," "Defendants' Exhibit Brown No. 3," "Defendants' Exhibit Budd No. 1," "Defendants' Exhibit Hassen," and "Defendants' Exhibit Liddle No. 1," and have you read the testimony of the several witnesses in this cause in relation to said exhibits?

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A. I have examined all the exhibits referred to in the question for the first time about two years ago, and have also read and understand the testimony referred to in the question. Since examining the exhibits "Defendants' Exhibit Mott No. 2" and "Defendants' Exhibit Lesster No. 1" have been lost, as I am informed. The rest of the exhibits named in the question are here present, and I understand what they are and their methods of operation as described by the various witnesses.

Q. 9. Please state whether, in your opinion, any of the exhibits referred to in the last question do or do not show the inventions of Thatcher referred to in the first and second claims of his patent, No. 104,376, and, in answering the question, please give your reasons fully for any opinion you may express.

A. "Defendants' Exhibit Mott No. 2," and "Lesster No. 1," which I saw about two years ago, so far as I remember, did not have any particular bearing upon this case. I know this from the fact that when I examined them had they shown the inventions of Thatcher they would have made a marked impression upon my mind, and consequently I know that the two exhibits which are now lost did not contain the inventions of Thatcher, as I understand the invention of each claim in question.

The Exhibit "Brown No. 1" is, as I understand it, an erroneous exhibit—that is to say, the witness first constructed "Brown No. 1" and then, after cross-examination, finding that this model was wrong, constructed "Brown No. 2" as a more accurate model of the thing which he recollected. It is unnecessary, therefore, for me to consider "Brown No. 1" further, and I will merely refer to "Brown No. 2."

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"Brown No. 3" is a circular of Shepard & Company, of No. 242 Water street, New York, which circular shows, but does not describe, a number of different forms of stoves which were for sale at Nott's stove warehouse. The particular cut referred to, as I understand it, has under it the words "Saracenic parlor grate for dining-rooms," &c. The same thing seems to be shown on a much smaller scale

in a cut showing a group of stoves diagonally above and to the right of the cut specially designated.

"Defendants' Exhibit Liddle No. 1" is a rough sketch accompanied by writing. Upon the Exhibit Liddle No. 1 appears the following writing, being apparently an extract from the patent of Nott, dated Oct. 25th, 1832:

"Eliphalet Nott. Fire-place heater. In the introduction (where the use of stove-pipe must be dispensed with, as is usually the case with stoves adjusted in fire-places) of an external metallic flue in place of an internal brick or stove flue for the purpose of the diffusion of the heat contained.

"This flue is based on a hollow plinth or other hollow foundation situated at the back of the stove, and divided by a horizontal floor into an upper and a lower compartment, the upper compartment forming a connection between said flue and the chamber of combustion by the lateral outlet, the lower compartment forming a connection with the ash-pit for the passing down of ashes through said horizontal floor by means of a valve adjusted therein.

199 "Between this exterior flue and the chamber of combustion along which it rises sufficient space should intervene for the free circulation of air.

* * * * * * *

"Previous to the adjustment of a stove in the fire-place the flue of the chimney should be closed with great care above the breast by throwing a horizontal floor across the same, pierced centrally for the admission of a smoke-pipe and pierced elsewhere, and the aperture governed by a valve, if additional means of ventilation be required.

Claim 3d.

October 25, 1832.

"The exterior metallic flue and its hollow plinth, when combined with the chamber of combustion, having a lateral outlet at bottom, and being itself elongated vertically above said outlet for the purpose of containing additional fuel to be heated."

The sketch upon the exhibit is almost unrecognizable, and the description, so far as I can see, does not specially refer to the sketch, but I think that the sketch may be intended to represent some form of the Nott heater, as shown in "Defendants' Exhibit No. 19." The "Defendants' Exhibit Hassen" is a very rough sketch, apparently intended to represent the same thing as is shown in "Exhibit Liddle No. 1." I understand from the exhibits and from the testimony that the following exhibits are all intended to represent the same thing: "Brown No. 2," "Brown No. 3," Liddle No. 1," and "Exhibit Hassen." Now, the thing represented by these exhibits, as I understand it, is the Nott heater, shown in "Defendants' Exhibits 19 and 20," at Fig. 17 or at Fig. 20, sometimes combined, according to the statements of some of the witnesses, with means to send up

200 heated air to the room above the one in which the heater is placed. Disregarding this testimony, there is nothing in the exhibits themselves which shows that the things represented by

them were intended to heat the room above that in which the heater was located, and the only evidence that I can find that such things were used to heat the room above is that of the witnesses themselves. Indeed, the language upon "Exhibit Liddle No. 1" would seem to preclude the heating of the room above by anything but the heat radiated from a drum or radiator through which the products of combustion were passed on their way to the outer air. Assuming, however, that the statements of the witnesses are true, and that with the Nott heater hot pure air was sent from the lower room to the upper room, and which air was discharged into the upper room from a register, even under such supposition the invention of Thatcher, as expressed in the first and second claims of his patent, No. 104,376, would not be shown by any of these exhibits for the reasons which I previously gave in referring to the Nott patent of 1835, "Defendants' Exhibit 19." I have already pointed out as clearly as I can the distinguishing features between the things shown in Figs. 17 and 20 of the Nott patent (assuming that they were set up in a fire-place) and the inventions of Thatcher, and it is therefore unnecessary here to repeat the reasons which I before have given at length and with great care; and, therefore, I assign the same reasons in the case of the three Brown exhibits and the Liddle and Hassen exhibits as I did before when I considered the Nott patent, "Defendants' Exhibit No. 19," and I do this for the reason that the Brown exhibits and the Liddle and Hassen exhibits are imperfect representations of the old Nott patented structure, and, so far as I can ascertain from these exhibits, nothing more.

201 Going now to the "Exhibit Budd No. 1," I find that said exhibit is a protuberant fire-place heater without a magazine of any kind. This Budd heater has a pot within the casing, and at the top of the apparatus, put in apparently without any special reason, but with the hope that it would increase the heating capacity of the device. Some parts of this heater are missing, I understand, to wit, certain pipes through which the products of combustion pass before they are finally discharged upwards. As both of the claims of the Thatcher patent refer to a fire-place heater having a magazine in it, it is evident that the "Exhibit Budd No. 1" does not show the invention of Thatcher as expressed in either of his claims as they now stand in patent No. 104,376.

Q. 10. Please examine "Defendants' Exhibit Burtis & Graff Fire Place Heater" and compare the same with the inventions described in the first and second claims of the Thatcher patent, No. 104,376, taking into consideration all of the structures, whether shown in the patents or otherwise, which are shown in the testimony in this cause to have existed prior in date to Thatcher's invention, and in this connection you may assume that Thatcher's invention was made as early as May, 1867, and please state, also, in connection with your answer, whether you have read all the evidence in this cause.

A. I have read all the testimony taken in this cause, and I think I understand the same.

I have carefully examined "Defendants' Exhibit Burtis & Graff Fire Place Heater," and I understand the construction and operation of the said device. The exhibit is a fire-place heater having a protuberant front or body which projects into the room in which the device is placed. It has a furnace-like back, which, when the heater is in position, is set into the fire-place for the purpose
202 of heating the air which is to be sent upstairs and there delivered into one or more rooms for the purpose of heating them, while the protuberant front of the heater is relied upon for the purpose of heating the room in which the device stands. The exhibit is provided with a magazine, which is intended to contain unignited coal, which coal will be fed by gravity into the fire-pot as occasion may require. Below the magazine there is a fire-pot larger in diameter than the mouth of the magazine, and within which fire-pot is the fire. The protuberant front or body encloses the magazine and fire-pot, and is directly subjected, as is also the back furnace-like portion, to the heat of the fire in the fire-pot. The magazine is projected from the top of the apparatus into the combustion chamber over the fire-pot, and the magazine is entered from the top of the heater, to which portion of the device the magazine is extended, so that when coal is to be furnished to the magazine such coal does not have to be passed through the combustion chamber and then into the magazine, but the said coal can be placed directly in the magazine from the outside of the stove or heater. I have carefully considered the state of the art in this connection, and I am clearly of the opinion that the said "defendants' exhibit," being the Burtis & Graff fire-place heater, commonly known as the "Morning Glory," does contain the inventions of the first and second claims of the Thatcher patent, No. 104,376. I have already in a previous part of this deposition defined what I understand to be the inventions of Thatcher, as expressed in the first two claims of his patent, and it is unnecessary here to state my understanding of his inventions. I will, however, compare the Morning Glory heater, "Defendants' Exhibit Burtis & Graff Fire Place Heater," with the Thatcher inventions. The first element of the first claim is,
203 as I have stated, a cylinder or body projecting outward from a mantel or frame; by this I understand that such a cylinder is referred to as will permit the air of the room to circulate in contact with its exterior surface, while its interior surface directly confines and is acted upon by the products of combustion. The "Defendants' Exhibit Burtis & Graff Fire Place Heater" has the first element of the first claim.

The second element of the first claim is a mantel or frame; by this I understand to be meant the front portion of the fire-place or the frame which is used to make a tight joint between the heater and the marble mantel, and which mantel or frame separates the protuberant front portion of the heater or stove part, as I may call it, which heats the lower room in which the heater is placed, from the back or furnace-like portion of the heater, the office of which latter part being to heat the air which is to go to the room or rooms above for the purpose of warming them. "Defendants' Exhibit

Burtis & Graff Fire Place Heater" has when in use a mantel or frame, and is only serviceable when used with such part.

The third element of the first claim is a fuel magazine or feeder within the cylinder; by this I understand that such a magazine is referred to as will contain when the apparatus is in operation a supply of unburnt and unignited fuel, which will be fed into the central part of the fire-pot as occasion requires, automatically, thus keeping the fire uniform and steady. The "Defendants' Exhibit Burtis & Graff Fire Place Heater" has this element of the first claim.

The fourth element of the first claim is an opening through which the magazine can be fed from above; and by this I understand that the magazine is to be brought up to the top of the apparatus, so that the coal can be thrown into it directly from
204 above through the said opening, and thus pass through the magazine on its way to the fire. "Defendants' Exhibit Burtis & Graff Fire Place Heater" has this element of the first claim.

It also has the fifth element of the first claim, viz., the furnace-like back portion found in all fire-place heaters.

From the above I am clearly of the opinion that the "Defendants' Exhibit Burtis & Graff Fire Place Heater" does contain the elements and the combination of elements referred to in the first claim of the Thatcher patent; and I give this as my opinion, having in view the state of the art, which, so far as I know it, does not show anything which causes me to doubt the correctness of my interpretation of the Thatcher invention.

The second claim of the Thatcher patent involves the first, second, third, and fifth elements of the first claim.

The fourth element of the second claim, however, is a magazine which is extended to the feed opening of the outer casing whether said feed opening is formed in the top of the outer casing or in the side or front thereof. Now, taking into consideration the state of the art as above considered, I am clearly of the opinion that the "Defendants' Exhibit Burtis & Graff Fire Place Heater" contains the invention referred to in this claim, the parts being the same parts, and the combination being the same combination.

Q. 11. Take into consideration the evidence in the case and consider the Thatcher patent in the light of such evidence showing the state of the art, and state whether or not the combinations of the first and second claims of patent No. 104,376 involved invention for their creation, and give your reasons for any statement you may make.

A. I have taken into consideration the various things sug-
205 gested in the question, and after careful consideration I have come to the conclusion that to create the inventions of the first and second claims of the Thatcher patent referred to in the question did require invention. My reasons for this opinion I will briefly state. The art before the date of the Thatcher inventions was, as I understand it, substantially as follows:

Outstanding stoves not set into a fire-place and not possessing the requisite features of construction for a fire-place heater, but having magazines which were fed from the top directly, were old and well

known. Fire-place heaters, adapted for warming the room or rooms above the one in which the heater was placed, and also adapted for heating the room in which the heater stood, such heaters being provided with protuberant fronts, were also old and well known; but such fire-place heaters did not possess a magazine or any equivalent therefor. Assuming the evidence of certain of the witnesses in this case to be true, the old Nott dining-room heater was arranged to warm the room above and the room below, and such device was provided with a "chamber of preparation" within which coal was contained and heated, and held in readiness to feed the fire, but this device of Nott did not have the Thatcher magazine, fire-pot, and hot protuberant front, and would not, I think, simultaneously heat successfully the room in which it was placed and rooms above, as must a modern fire-place heater, in which the protuberant front is relied upon for heating the lower room alone and the back furnace-like portion of the heater is alone relied upon for heating the upper room. Even if I am wrong about its success, as just stated, it would not operate substantially as does Thatcher's device.

The problem which Thatcher had before him was to place the magazine of his patent within the Bibb & Augee fire-place heater, or, rather, his invention may be said to have consisted in the
206 conception of the idea of taking out the fuel chamber or pot of the Bibb & Augee device, and substituting therefor a magazine of the kind shown in the Thatcher patent, the execution of which conception, if successful, had for its object to confer upon the fire-place heater the regularity and steadiness of action which alone could be secured by the use of a magazine standing ready always to automatically feed the fire whenever it may become necessary. Now, it was not at all an obvious thing that this large mass of unignited coal could be put within the comparatively limited compass necessary for the ordinary fire-place heater in place of the incandescent coal contained in the pot or fuel chamber of the Bibb & Augee heater, and still leave a heater which would be successful. Indeed, one of the defendants' witnesses in this case placed a magazine in a fire-place heater, tried it, and abandoned it as useless and as a positive injury, rather than, as future experiments have shown, a great benefit, to the structure. Another witness seems to have introduced a magazine into one of his fire-place heaters at about the date of Thatcher's patent. This witness says that he did not think it was important, but says that had he known anything of its importance he would have got a patent for it. These two witnesses clearly show that the putting of a magazine into a fire-place heater was not obviously a good method of improving the old Bibb & Augee heater, and that even after a magazine had been introduced that its utility was not manifest without experiment and careful trial, and this testimony is given by men who apparently were thoroughly skilled in the art and had had much and long experience in the fire-place heater business. A consideration of the old Nott structure, if it ever existed, as testified to, would have deterred rather than encouraged any one from introducing such a fuel receptacle as was
207 there shown into a fire-place heater which was required to

heat rooms above and below simultaneously. For the reasons above given I think that it required invention to introduce a magazine extending to the top or outer casing of the stove into a fire-place heater having a protuberant front for heating the room in which the heater stood and a furnace-like back for heating the air for the rooms above. Most assuredly, the parts referred to in the first and second claims of the Thatcher patent coact when in action in the production of the result desired. The protuberant body heats the lower room. The mantel or frame separates one portion of the heater from the other, so that the protuberant body may perform its function while the furnace-like back may perform its function. The fuel magazine holds the fuel in readiness to supply the fire which is to heat both back and front alike with steadiness and uniformity, the magazine being fed through a hole in the outer casing directly, thus obviating the opening of any doors into the combustion chamber when the fire is to be fed and the consequent cooling off of the heater by admitting fresh air into the device above the grate. By the bringing together of these parts and their joint action one with the other a fire-place heater is formed having advantages over any heater that went before, and which form of heater has gone so extensively and largely into use that it has practically superseded all other forms, as I am informed.

Q. 12. Please compare Exhibit Sexton's Cross-Section with the drawing of Defendants' Exhibit No. 1, and state the result.

A. Both are intended to represent the same structure.

208 NEW YORK, *January* 11, 1882—11 o'clock a. m.

Met pursuant to adjournment.

Present: B. F. Lee, Esq., of counsel for complainants, and A. J. Todd, Esq., of counsel for defendants.

Adjourned to Saturday, January 14th, 1882, at 11 a. m.

NEW YORK, *January* 14, 1882—11 o'clock a. m.

Met pursuant to adjournment.

Present: Counsel as before.

Adjourned to Thursday, January 19th, 1882, at 11 a. m.

Adjourned to January 24, 1882, at 11 a. m.

NEW YORK, *January 24th*, 1882—12 o'clock m.

Present: Counsel for respective parties.

Defendants' counsel objects to the 6th question as immaterial and to the 10th question as incompetent, as not being asked in the *prima facie* case.

209 The cross-examination of HENRY L. BREVOORT, Esq., by A. J. TODD, Esq.:

X Q. 13. You say in your 11th answer that "oustanding stoves, &c., and not possessing the requisite features of construction for a fire-place heater, but having magazines which were fed from the top directly, were old and well known." Now, in what sense do you understand the state of the art to show magazines in outstanding

stoves prior to the date of the alleged Thatcher invention. Do you mean that the magazine existed in the outstanding stove coming up through the outer casing so as to be fed from the top of the stove substantially as stated in the specification of the Thatcher patent and referred to in the 1st claim thereof?

A. I do not know that such construction ever existed in a stove before the date of the Thatcher invention, but such constructions are shown in patents earlier in date than the invention of Thatcher.

X Q. 14. Have you any reasonable doubt of the prior existence of such structures in outstanding stoves?

A. I have no belief on the subject whatever.

X Q. 15. In addition to the state of the art to which you have been so far referred in this case, please look at the specifications and drawings of the letters patent granted to Van Worner & McGarvey, dated May 1, 1866, No. 54447, for a "magazine stove;" also letters patent to Albert Brown, dated February 12, 1867, No. 61922, for magazine stove; also the specification of English letters patent granted Robert Russell, A. D. 1857, No. 113, for stoves and fire-places, and state whether such element of magazine did not exist in the state of the art prior to the invention of Thatcher in all material
210 respects as set forth in the specification of the 1st claim of the Thatcher patent, except that it was applied to an outstanding stove instead of to a fire-place heater. By the state of the art I am referring to patents and printed books.

A. I have looked at the patents referred to in the question. Each one of them shows outstanding stoves having magazines coming up to the top plate of the stove, and which magazines when they are to be supplied with coal are fed from the top direct.

Defendants' counsel offers in evidence as part of the state of the art a copy of United States letters patent granted to Van Worner and McGarvey, dated May 1, 1866, and No. 54447, and which are marked Defendants' Exhibit Van Worner Patent, J. A. S., examiner, January 24, 1882.

Also offers in evidence the U. S. letters patent granted to Albert Brown for magazine stove, dated February 12, 1867, No. 61922, and the same is marked Defendants' Exhibit Brown Patent, J. A. S., examiner, January 24, 1882.

Also offers in evidence English letters patent granted to Robert Russell in the year 1857, for stoves and fire-places, and which are numbered 113, and the same is marked Defendants' Exhibit Russell Patent, J. A. S., examiner, January 24, 1882.

X Q. 16. What do you mean by the expression that these outstanding stoves "do not possess the requisite features of construction for a fire-place heater?"

A. I mean that the outstanding stoves with top-feeding magazines which were before the date of Thatcher were not suitable in
211 shape to be set within a fire-place; did not possess a back furnace-like portion adapted to heat the air for the upper room and capable of going within a fire-place, and were thus unsuited to fulfill the duties of a fire-place heater.

X Q. 17. But fire-place heaters having such back furnace-like portion adapted to heat the air of the upper room existed in all material respects, as shown in the Thatcher patent, except that they did not contain within the cylinder or body thereof the magazine, as shown in the outstanding stoves existing in the state of the art prior to the alleged Thatcher invention. Is not this also what you mean by your 11th answer?

A. Yes; the Bibb & Augee patent and structure is what I had in mind when I gave the testimony which is referred to.

X Q. 18. Would not the American, McCann, and other like exhibits in this case be within the meaning of the language contained in your 11th answer when you are referring to fire-place heaters without a magazine?

A. Yes.

X Q. 19. Will you testify that in fire-place heaters without the magazine, which you say in answer to Q. 11 were "adapted for warming the room or rooms above the one in which the heater was placed, and also adapted for heating the room in which the heater stood, such heaters being provided with protuberant fronts," did not successfully perform the duty of simultaneously heating both the room in which it was placed and the rooms above?

A. I suppose they would perform the work required of them, but I do not think that they would be as efficient as a heater provided with a magazine.

X Q. 20. What is the object of a magazine in an outstanding stove—for instance, such a magazine as is shown in stoves [in]
212 Defendants' Exhibits Brown's Patent and Warner & McGarvey Patent and Russell Patent?

A. The object is to enable a supply of unignited coal to be held in readiness to automatically feed the fire when necessary, thus dispensing with the frequent services of an attendant, while the fire, in the absence of the attendant, is fed with perfect regularity and only at the proper interval, the attention of the attendant only being necessary at widely separated intervals when the magazine requires to be charged.

X Q. 21. Does the magazine enable the stove to give out any more heat than if the stove did not contain any magazine?

A. I do not think that it enables the coal to give out any more heat than would be given out by the same amount of burning fuel utilized in an apparatus having the same radiating capacity exactly, but the heat is more uniform, and the magazine usually being placed within a cylinder forces the products of combustion as they rise around the magazine into contact with the outer wall or body of the device, and this probably tends to increase the amount of heat radiated. Whether or not the heating of the coal in the magazine is of any material advantage I am unprepared to state, but it is my belief that such heating of the coal would be beneficial rather than hurtful.

X Q. 22. Now, is not the fact that just these effects are produced when a magazine is employed in the fire-place stove or heater instead of in the outstanding stove?

A. Yes.

X Q. 23. Have you personal knowledge of the practical operation of protuberant fire-place heaters without any magazine in them, and also of outstanding stoves containing magazines extending up to and fed in from the top plate of the stove?

213 A. I have never operated a fire-place heater of the kind referred to. I have operated, however, stoves outstanding having a magazine fed from the top direct.

X Q. 24. Then, in your opinion, Mr. Thatcher's alleged invention consisted in putting into the fire-place heater, as the fire-place heater existed with a protuberant front, and without any magazine or feeder of any kind to it, a magazine constructed, arranged, and fed like the magazine shown in one or more of the outstanding stoves described in the state of the art, as such art existed prior to the alleged invention of said Thatcher?

A. Mr. Thatcher's invention consisted in the conception that the magazine of the outstanding stove which was fed through the top or through a hole in the outer casing direct could be beneficially located within the protuberant body of a fire-place heater. This conception when developed in practice constituted the Thatcher invention.

X Q. 25. Have you made any practical tests or observations in order to see whether there was any difference in the heating properties of the protuberant front fire-place heater, both as respects the room in which it is located and the rooms heated by it above that in which it is placed, when such fire-place heater did contain a magazine within its walls fed through the top plate thereof, and when it did not contain such a magazine?

A. I have not made any experiment of the nature suggested in the question, principally because an experiment of such a nature would be extremely expensive, and to be at all valuable would have to cover a period of at least one winter, or possibly two winters.

X Q. 26. Was your attention at all called, at the time of the alleged making of the Thatcher invention in controversy, to the various kinds of fire-place heaters which were in use, or did

214 you at that time particularly pay attention to their efficiency and general operation? If so, will you give the particular make of heater to which your attention was then directed?

A. I made no examination in about 1867, or thereabouts, of fire-place heaters, although I had seen them in use, but do not now remember whose make they were, not being especially interested in the subject so many years ago.

X Q. 27. When did you first see the alleged infringing stove or heater marked Defendants' Exhibit Burtis & Graff Fire Place Heater?

A. I do not remember; some time within the last two years. I have, however, seen heaters like it in substance, however, before.

X Q. 28. Does not said alleged infringing fire-place heater contain a magazine within its cylinder, and fed from the top casing thereof, having longitudinal slots throughout its body substantially

like the magazine contained in the cylinder of the outstanding stove shown in Defendants' Exhibit Brown Patent?

A. The Brown patent contains an open-work magazine substantially the same in construction as the magazine of the defendants' heater in this case.

X Q. 29. Does not the magazine of the alleged infringing fire-place heater, Defendants' Exhibit Burtis & Graff Fire Place Heater, contain on its magazine the date of the said Albert Brown patent?

A. I will examine the exhibit referred to, and will then answer the question. I have now made the examination, and I find that the magazine is marked as indicated in the question.

X Q. 30. What do you understand by the language of the Thatcher specification where he says in the preamble: The
215 invention, secondly, &c., "so that there may be no open space across which to project the fuel in feeding the magazine." What "open space" is there referred to?

A. I understand that portion of the specification refers to the distinction which exists between Thatcher's invention and structures in which the fuel has to be passed from the room into and across the combustion chamber, and thence into the magazine, a portion of the combustion chamber being, as I understand it, the open space referred to.

Adjourned to Friday, January 27th, 1882, at 11 o'clock a. m.
Adjourned to January 30th, 1882, at 11 o'clock a. m.

NEW YORK, *January 30th*, 1882—11 o'clock a. m.

Met pursuant to adjournment.
Present: Counsel as before.

The cross-examination of HENRY L. BREVOORT, Esq., continued by A. J. TODD, Esq.:

X Q. 31. Why do you state in answer to Q. 9 that Defendants' Exhibit Lester No. 1 does not have any particular bearing on this case? Has it not a fire-place heater containing a protuberant front, a furnace-like back, and all the other elements which you consider essential in the Thatcher fire-place heater, except a magazine
216 in the combustion chamber which is fed through the top plate of the heater and in front of the mantel?

A. I think that the exhibit referred to in the question and which is now lost, as I am informed, did contain the features of construction which are stated in the question. My reason for saying that it did not have any particular bearing on this case was because the said Exhibit Lester No. 1 did not have the magazine of the Thatcher patent, and which magazine is by the terms of the Thatcher patent made an essential element of the invention of each of the claims said to be infringed in this case.

X Q. 32. Was not the Defendants' Exhibit Mott No. 2, referred to in the question, an outstanding Morning Glory stove having a magazine within the combustion chamber with its lower end of smaller area than the area of the fire-pot, with such magazine

placed within the cylinder of the stove so that the products of combustion could pass around it and between it and the cylinder of the stove, and such magazine be fed through the top plate of the stove, as seen in Defendants' Exhibit Brown Patent and Defendants' Exhibit Worner and McGarvey Patent?

A. As I remember the stove, Defendant's Exhibit Mott No. 2, it was an ordinary outstanding stove having a magazine arranged as stated in the question and fed from the top as are the magazines of the stoves shown in the two patents mentioned in the question. My memory is not very distinct about the matter, however, but I have given my best recollection of the structure.

HENRY L. BREVOORT.

217 Counsel for complainant offers in evidence a certified copy of specification and drawing in the matter of the letters patent granted S. B. Sexton April 19, 1859, No. 23716, and the same is marked Complainant's Exhibit Sexton Fire Place Heater Patent, J. A. S., Ex'r, January 30, 1882.

Also a certified copy of the specification and drawing in the matter of the letters patent granted B. C. Bibb and H. Augee April 30, 1861, No. 32176, and the same is marked Complainant's Exhibit Bibb & Augee Fire Place Heater Patent, J. A. S., Ex'r, January 30, 1882.

Said two exhibits are the papers referred to by the witnesses Klotz, Hutchinson and Richards —, taken in Baltimore.

Complainant's counsel seasonably objected to the introduction of the patents introduced by defendants as part of complainant's evidence in the cross-examination of Mr. Brevoort.

Testimony closed.

218 COMPLAINANTS' EXHIBIT BIBB & AUGEE FIRE PLACE HEATER.
J. A. S., Ex'r. Jan'y 30, 1882.

(65.)

(Vignette.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE.

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the records of this office of the specification and drawing in the matter of the letters patent granted B. C. Bibb and H. Augee April 30, 1861, No. 32,176, for improvement in fire-place stoves.

In testimony whereof I, W. H. Doolittle, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this twenty-first day of February, in the year of our Lord one thousand eight hundred and seventy-nine, and of the Independence of the United States the one hundred and third.

[SEAL.] W. H. DOOLITTLE,
Acting Commissioner.

BIBB & ANGEE.

Fireplace Stove.

No. 32,176. Patented April 30, 1861.

Fig. 2

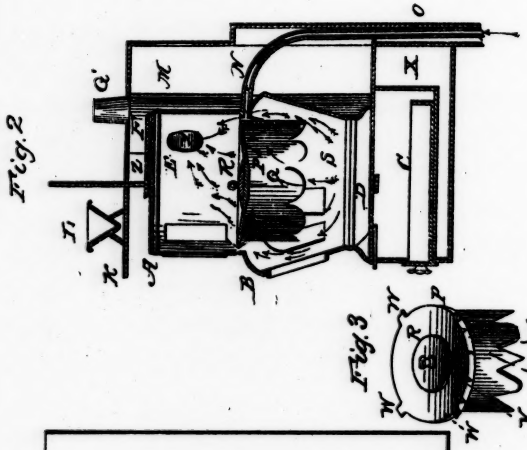


Fig. 3

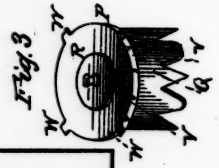
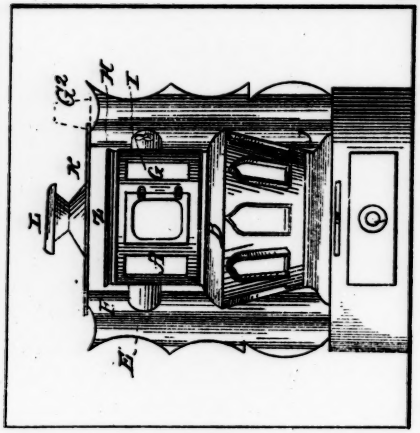


Fig. 1



No. 150. Thatcher Heating Co. et al. v. Burtis et al. p. 220.

Witnesses
Thomas A. Perkins
Lewis Penrod

Inventors
B. C. Bibb
H. Angee
by
Robt. M. Hemenway
Attorney

219 B. C. BIBB & H. AUGEE, of Baltimore, Md.

Imp't in Fire Place Stoves.

Letters Patent No. 1172. Whole No. 32176. Dated Ap'l 30, 1861.

To all whom it may concern:

Be it known that we, B. C. Bibb and H. Augee, of the city and county of Baltimore and State of Maryland, have invented a new and useful improvement in fire-place stoves, and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

(Here follows diagram marked p. 220.)

Fig. 1 represents a front view; Fig. 2, a vertical central section, and Fig. 3, a perspective view of a detached portion of a stove.

Similar letters of reference in each of the several Figs. indicate corresponding parts.

The nature of our invention consists, 1st, in the relative arrangement of a pedestal stove, its front half projecting beyond the mantel front into the room, air-heating space, hot air columns, and conical pipe, in combination with a deflector and urn supporter extending from the mantel front.

It consists, 2d, in a pedestal stove, as hereinafter to be described, a suspended pot combined with a peripheric hollow space, perforations, and cold-air pipe, all the parts constructed and ar-
221 ranged in relation to each other substantially as hereinafter set forth.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

The stove consists of a conical pedestal extended towards the top, as seen at B, and a cylindric top, A. D is the grate at the bottom of the pedestal and C the ash-box below it.

The rear half of the stove is set in the fire-place casing M, and the front half of the stove projects beyond the mantel front, as seen in Fig. 2. This arrangement of the stove causes it to be much more effective towards heating the room than if the whole stove or the greater part of it were set back in the fire-place casing. A horizontal plate, K, projects from the mantel front, as seen in Fig. 2, above the top of the projecting part of the stove. This projecting plate K serves the double purpose of supporting the urn L and of deflecting the heat so as to protect the shelf of the mantel-piece from being injured by it.

A plate, Z, arranged on top of the rear half of the stove, serves as additional heating surface, and prevents the heat of the top part of the stove from immediate contact with the top of the fire-place casing. Without this plate Z the top of the fire-place casing would be heated to a considerable degree, and much of the heat would thus escape into the chimney.

Two short pipes, E G, connect the cylindric part A of the stove with two vertical columns, F H, arranged in the casing M. The top of one of these, F, is closed, its lower end communicating with the space X behind the ash-box. The lower end of the other column H communicates also with the space X, and its upper end extends through the top of the casing M into the chimney,
222 and terminates in a conical pipe, G^1, narrow at the top. The short pipe G is provided with a damper, I, and the bottom end of column H with a slide-valve, J. When the damper I is closed and valve J open the heat, smoke, &c., from the interior of the stove will pass through pipe E and column F into space X, and thence through column H and conical pipe G^1 into the chimney, but when the damper I is open and valve J closed the draught will pass from the interior of the stove immediately through pipe G, column H, and pipe G^1 into the chimney. Thus the circulation of the heat can be regulated.

A pot, Q, is suspended by means of flanges W in the upper part of the pedestal B, leaving a circular open space between its outer periphery and the inner surface of the stove, through which space the gases and products of combustion can find their way from the pedestal into the cylindric top part of the stove, as indicated by arrows U U.

The top of the pot is closed by a plate provided with a hole and cover, R, in the center, and is surrounded by a peripheric hollow space, P, perforated, as seen in Fig. 3, at V. A pipe, N, leads from this peripheric hollow space through the channel O out into the open air. The channel O serves to admit fresh air from the outside into the fire-place casing, where it comes in contact with the stove, and is heated before entering the room.

When the fire is to be started the pot cover R is removed, so as to cause the draught to be direct. When the fire is fairly burning the cover R is replaced. The flames will be deflected by the closed top of the pot, and thus be caused to pass down the inside and up the outside of the pot and up around the peripheric hollow space P, as indicated by arrows U U, and the fresh air issuing from
223 the perforations V will mingle with the flames, and thus be very effective towards increasing the combustion of the partially ignited gases.

The old method of introducing air from the outside of the stove through perforations made in the periphery of the stove instead of through the space P and pipe N, as above described, presents the disadvantage that by the strong draught going on through said perforations the part of the stove near these perforations is kept comparatively cool. This difficulty is obviated by arranging the space P around the pot, and introducing the fresh air through pipe N, as set forth.

What we claim as our invention, and desire to secure by letters patent, is—

1st. The relative arrangement of a pedestal stove, A B, its front half projecting beyond the mantel front into the room, air heating space Z, hot-air columns F H, and conical pipe G^1, in combination

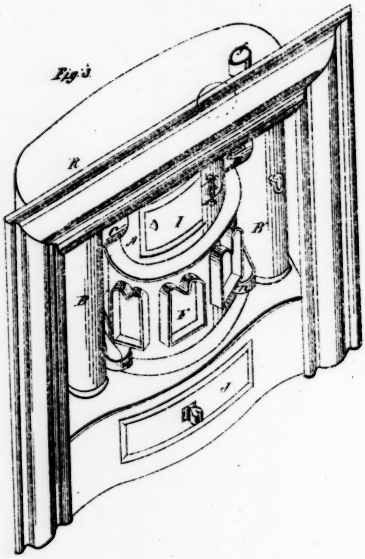
S. B. Sexton.

Magazine Fire-Place Stove.

Patented Nov. 19, 1859.

No. 23,716.

Fig. 3



No. 150.
Matteson Heating Co. et al. v. Burtis et al. } p. 225.

Fig. 1

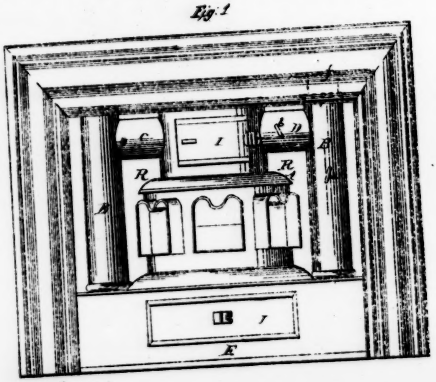
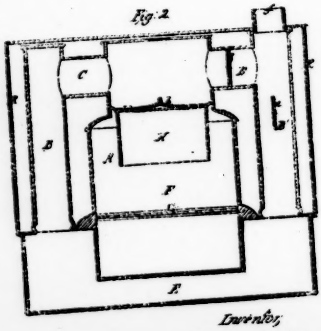


Fig. 2



Witnesses;
Chas. McCoy
Jno. McCoy

Inventor;
S. B. Sexton

with a deflector and urn supporter, K, extending from the mantel front, substantially as and for the purposes set forth.

2d. The arrangement of the cold-air pipe N, so that it receives its supply from the outside of the building in the manner herein shown and described, in combination with a peripheric hollow chamber, P, having perforations V and the suspended pot Q; all the parts constructed and arranged in the relation to the combustion chamber and to the hot-air chamber of a fire-place or pedestal stove, as described and represented for the purpose set forth.

BENTLY C. BIBB.
HENRY AUGEE.

Witnesses:
JNO. H. WOODWARD.
WM. H. BAYZAND.

Ex.: J. A. W., M. McK.

224 COMPLAINANTS' EXH. SEXTON FIRE PLACE HEATER. J. A. S., Ex'r, January 30, 1882.

(65.)

(Vignette.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE.

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the records of this office of the specification and drawing in the matter of the letters patent granted S. B. Sexton April 19th, 1859, No. 23716, for improvement in stoves.

In testimony whereof I, W. H. Doolittle, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this twenty-first day of February, in the year of our Lord one thousand eight hundred and seventy-nine, and of the Independence of the United States the one hundred and third.

[SEAL.] W. H. DOOLITTLE,
Acting Commissioner.

(Here follows diagram marked p. 225.)

226 S. B. SEXTON, of Baltimore, Maryland.

Improvement in Stoves.

Letters Patent No. 23716. Dated April 19, 1859.

To all whom it may concern:

Be it known that I, S. B. Sexton, of Baltimore, in the county of Baltimore and State of Maryland, have invented a new and useful improvement in stoves, and I do hereby declare that the following is a full, clear, and exact description of the same, reference being

had to the annexed drawing forming part of this specification, in the several figures of which similar characters of reference denote the same part:

Figure 1 is a front elevation of stove. Figure 2 is a vertical longitudinal section of same. Figure 3 is a perspective view, showing cold-air chamber.

My invention consists in a certain combination of parts hereinafter to be set forth constituting an improvement in cylinder stoves constructed with a covered fuel chamber reaching nearly to the grate, so as to furnish a continued supply of fuel to support combustion in the fire chamber below and exterior to the said fuel cylinder, the object of this improvement being to combine with this con-
227 struction increased radiating surface and facilities for warming apartments above the location of the stove, while all the advantages of the peculiar construction as applied to a single cylinder are retained, the entire combination being ornamental and well adapted for the purposes above stated.

In the drawing A is the central apartment of the stove containing the fire chamber F and the covered fuel chamber H. On each side of this chamber F is a chamber, B B^1, connected with the cylinder of the central chamber by pipes C and D, and in communication with each other by lower flue E. In the right-hand chamber is a damper, *a*, and in pipe D a damper, *b*. The exit flue *f* is over chamber B^1.

Around the back portion of the aforesaid chambers is a casing, R, forming an air chamber, in which the heat of the three chambers A B B^1 has the effect of warming air, which is conveyed into an upper apartment by a flue leading from the top of the chamber.

The closing of damper *a* and opening of damper *b* permits the immediate exit of the products of combustion, and the closing of damper *b* and opening of *a* causes the draft to pass downward through chamber B and upward through the chamber B^1.

Cold air passes into chamber R from the rear, and also from the front between the chambers A and B B^1.

Between the chambers are the water pans *p* for the evaporation of water to furnish moisture to the air.

I do not claim any of the parts of this stove separately considered; but I claim the covered fuel cylinder H, in combination with the chambers A B B^1, flues C and D, and dampers *a* and *b*, to-
228 gether with the rear casing R, constituting a cold-air chamber, the arrangement being as set forth.

In testimony whereof I have hereunto set my hand before two witnesses.

S. B. SEXTON.

SAM'L McCOY.
JNO. A. PIFFER.

Ex'd: F. F., L. M.

229 COMPLAINANTS' EXHIBIT BURROWS' APPLICATION.

(65.)

(Vignette.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE.

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the files of this office of the file-wrapper and contents in the matter of the application of William Burrows, filed December 4, 1869, for "base-burning stove."

In testimony whereof I, W. H. Doolittle, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto affixed this sixth day of February, in the year of our Lord one thousand eight hundred and seventy-eight, and of the Independence of the United States the one hundred and second.

[L. S.] W. H. DOOLITTLE,
Acting Commissioner.

230 To the Commissioner of Patents:

The petition of William Burrows, of Brooklyn, in the county of Kings and State of New York, respectfully represents—

That your petitioner has invented certain new and useful improvements in base-burning, top-feed fire-place stoves, which he verily believes *has* not been known or used prior to the invention thereof by your petitioner. He therefore prays that letters patent may be granted to him therefor according to the terms and conditions of the statute.

And I, having assigned said invention to B. C. Bibb, of Baltimore, Maryland, do hereby authorize and request the Commissioner of Patents to issue the said patent to him as the legal owner thereof.

WILLIAM BURROWS.

To all whom it may concern:

Be it known that I, William Burrows, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful improvements in top-feed, fire-place, base-burning, or fuel-supply magazine stoves, and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings forming a part of this specification, in which figure 1 is a front view of my improved fire-place stove, showing the top feed hole covered by my divided pivoted hinged covers or screens. Figure 2 is a top view of the same, the screens or cover sections being shown open or swung apart on their pivots. Figure 3 is a vertical cross-section of the above in the line *x x* of figure 2, showing the magazine, cover, gas escape, and direct draft flue; also one of the pivoted screens or covers over the door or lid which closes the feed hole. Figure 4 is a rear view of the
231 stove. Figure 5 is a cross-section in the line *y y* of figure 2. Figure 6 is a detail of the stove.

Similar letters of reference in the several figures indicate corresponding parts.

(Insert A, March 1, 1870.)

The nature of my invention consists in a fire-place, fuel-supply magazine stove with top feed hole (and with or without gas escape leading from the magazine), furnished with divided, hinged, or pivoted sections of a screen in such a manner that these screens close over and hide from view the lid or door which close the feed passage to the magazine; such screens giving also an ornamental finish to the front top part of the stove by hiding the same from view and presenting to the eye a form similar to the section of an arch or sphere, the surface of which arch or sphere is ornamented in finish.

My invention also consists in a hinged or pivoted screen made in two parts and furnished with independent pivots, such screen being adapted for use on the front portion top of fire-place stoves.

My invention also consists in a screen which is pivoted and applied over the front projecting top part of a fire-place stove.

My invention also consists in a magazine which extends up to the top of the outer casing of the stove, and has a feed hole in its top in combination with fire-place stoves, substantially as hereinafter described.

To enable others skilled in the art to make and use my invention I will proceed to describe the same with reference to the drawings:

A is the base of the fire-place stove. B B are the dividing flues; C C^1, the draft flues, and C^2 C^2, return flues; D, the outer casing of the stove; E, its grate; F, the magazine; G, the hole in top of stove near front portion leading into the magazine; H is the gas-escape passage from top of magazine to the main draft flue. This
232 escape is open when the feed cover I is removed, so that the gas shall not puff out into the room while supplying coal or on suddenly opening the feed hole to introduce coal.

The feed-hole cover I and also the top of the stove are obscured by means of screens or ornamental covers, J J, which give a handsome finish. I have shown two sections of a hinged screen, each section having its own pivot, *a a*, and may have its own knob or projection, *b*, by which it may be swung around from over the feed-hole cover for access thereto when desired, as illustrated in figure 2. The screen sections are, in profile, a segment of an arch or sphere, and between them and the top of the stove a hot-air chamber is formed, and as it is common to use perforations in screens for tops of stoves these screens of mine, of course, may be perforated if deemed desirable.

What I claim as my invention and desire to secure by letters patent is—

Insert B, June 1, 1869.
It is immaterial whether the section be perforated or not.
S. & B., June 23, 1868.
S. & B., June 1, 1869.
S. & B., J. M. Thatcher.

The pivoted or hinged divided sections for screening the top feed-hole cover of a base-burning or fuel-supply magazine stove which is applied within a fire-place, all substantially as and for the purpose set forth.

A. R. Sanders, July 14, 1868.
S. & B., June 1, 1869.

2nd. A pivoted or hinged screen applied to the top of a fire-place stove (insert A, Dec. 17, 1869), substantially as and for the purpose described.

3d. The top-feed magazine applied to a fire-place stove, substantially as herein described.

4th. A divided screen which is pivoted and applied on the front projecting top part of a fire-place stove, substantially as described. (Insert C, Mar. 1, 1870.)

WILLIAM BURROWS.

Witnesses:

WM. S. BARKER.
R. W. FENWICK.

Endorsed: $\frac{36}{20}$. Wm. Burrows. See amendment. F'd Dec. 17, 1869. (Patent Office, Dec. 4, 1869.)

233 *Oath.*

STATE OF NEW YORK, *County of New York,* } *ss:*

I, William Burrows, do solemnly declare and depose that I verily believe that I am the original and first inventor of the improvements in base-burning, top-feed fire-place stoves claimed by me in the specification hereto annexed; that I do not know or believe that the said invention was ever known or used before it was invented by me, and that I am a citizen of the United States.

WILLIAM BURROWS.

Subscribed and sworn to before me this 17th day of November, 1869.

[L. s.] WILLIAM BARKER,
Notary Public, N. Y. Co.

To the hon. Commissioner of Patents.

SIR: In the matter of William Burrows' application for a patent on top-feed fire-place stove assigned to me I hereby amend the 3d claim as follows:

After the word "stove" in said claim insert as follows:

A, Dec. 17, 1869. Erase. B, Mar. 1, 1870.

[Said stove being constructed with or without the gas escape, and the upper portion of its wall forming the top to the magazine and also surrounding the inner vertical portion

234 of the same so as to form a circulation chamber around it; said stove also having diving flues.]*

Respectfully submitted,

B. C. BIBB, *Assignee of Wm. Burrows,*
By MASON, FENWICK & LAWRENCE.

December 14, 1869.

Endorsed: Patent Office, Dec. 14, 1869.

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* Words and sentences enclosed in brackets erased in original.

To the hon. Commissioner of Patents.

SIR: Please recognize Mason, Fenwick & Lawrence, of Washington, D. C., as my agents in the matter of the application of Wm. Burrows for a patent on a base-burning, top-feed, fire-place stove, filed in the Patent Office on 4th December, 1869.

December 14th, 1869.

B. C. BIBB,
Assignee of William Burrows.

[50-cent stamp, canceled.]

Endorsed: $\frac{3}{2}\frac{6}{0}$. Amendment. F'd Dec. 17, 1869. Also power of attorney, M., F. & Lawrence. See 2d amendment. F'd Mar. 1, 1870. (Patent Office, Dec. 14, 1869.)

235 WASHINGTON, D. C., *March 1st*, 1870.

Hon. Commissioner of Patents.

SIR: We herewith file an amendment in Wm. Burrows' application for a patent on a fire-place stove.

We respectfully request an early decision in this case.

Yours truly, MASON, FENWICK & LAWRENCE.

Endorsed: $\frac{3}{2}\frac{6}{0}$. Wm. Burrows' att'ys to office. Filed March, 1, 1870.

To the honorable Commissioner of Patents.

SIR: In the matter of the application of Wm. Burrows, assignor to B. C. Bibb, for a patent on a fire-place stove the following amendment is made to the specification and claims:

1st. Insert, just before the nature of the invention, the following, to wit:

The top-feeding stove hereinafter to be described is intended as an improvement on that class of fire-place base-burning stoves which have windowed or illuminated outer walls, opposite which windows free gases or flame circulates, and also have magazines, which are supported within the chamber formed by such walls in such a manner that the burning gases or the flame has freedom to circulate in front of as well as around the sides and back of the magazine. The class of
A. stoves referred to are generally known in the trade as "Sex-
Mar. 1, ton's Fire Place Heater" or "Bibb & Co.'s Fire Place Heater,"
1870. and the invention, which I regard as an improvement on this class of stoves, relates, 1st, to increasing the capacity of the
236 magazine and at the same time providing for feeding the coal into the magazine from the top of the stove instead of at the side and below the top thereof; 2d, it relates to a gas escape from the top of the magazine to the draft-flue, whereby pent-up gases are allowed to pass into the said flue when the feed passage is opened and also when it is closed; 3d, it relates to a movable but permanently attached screen or cover divided, preferably, into two parts and arranged on the front top part of the stove over the top feed cover or door.

B. Amend. 2d. By cancelling the amendment made to the 3d claim on or about the 14th December, 1869.

C. Amend. 3d. By inserting the following additional claims:

5th. The top-feed magazines with a guiding shute applied to a fire-place stove which has diving flues forms the top to the magazine and surrounds the vertical portion of the same so as to form a circulation chamber around it, substantially as described.

A. R. Sanders.

6th. The magazine, fire-place, top-feeding, base-burning stove having a flame-circulation space around its magazine and a gas-escape passage above the top edge of the magazine or between the top of the stove and the upper end of said magazine, substantially as described.

S. B. Sexton, Dec. 14, 1869.
J. M. Martino.

7th. In combination with a top-feeding, base-burning, fire-place stove which has a magazine I claim the movable screen arranged to hide from view the cover of the top feed hole and the front top part of the stove, and is permanently attached to the stove but incapable of being moved aside from over the feed-hole cover, substantially as and for the purpose set forth.

All base-burners have magazines or reservoirs for containing coal.
S. & B., June 23, 1868.
Reis., Aug. 17, 1869.
S. & B., June 1, 1869.
S. B. S., Sept. 28, 1869.
" Dec. 14, 1869.
J. J. Meyers, "
B. C. B., July 20, 1869.
B. & K., Nov. 23, 1869.
B. & K., " 23, "
Also in pend. affair of S. & P., now in int'f. with B. & K., case A.

Respectfully submitted,

MASON, FENWICK & LAWRENCE,
Att'ys for B. C. Bibb, Assignee.

March 1, 1870.

237 Endorsed: $\frac{9}{2}\frac{6}{0}$. Wm. Burrows' 2d amendment. Filed March 1, 1870. Amendment in Wm. Burrows' application for a patent on a fire-place heater. (Patent Office, Mar. 11, 1870.)

No. 1.

U. S. PATENT OFFICE,
WASHINGTON, D. C., *March* 4, 1870.

William Burrows, care Mason, Fenwick & Lawrence, Washington, D. C.:

Please find below a communication from the examiner concerning your application for a patent for a base-burning fire-place heater, filed Dec. 4, 1869.

Very respectfully,

——— ———,
Commissioner.

EXAMINER'S ROOM No. 100.

Apparently a change in the phraseology of the paragraph ending 8th line from bottom of page 3 of specification is required; also in second paragraph on page 5.

The 1st claim for a screen divided into sections and pivoted or hinged to the top of a base-burning fire-place stove is found in the patent to D. Stuart & L. Bridge, June 1, 1869. (See also Bibb & Klotz' case B, passed for issue Jan. 21, 1870.) The

Error—cited from recollection only.

2d claim, for a pivoted or hinged screen, whether divided or
238 undivided, and applied as described in 1st claim, is anticipated by the patents to Stuart & Bridge, June 23, 1868 (reissued Aug. 17, 1869), and June 1, 1869; case of Bibb & Klotz, passed for issue Jan. 21, 1870.

The 3d claim, for a top-feed magazine applied to a fire-place stove, is found in the patents of A. K. Sanders, July 14th, 1868; Jno. M. Thatcher, Dec. 22, 1868, and June 15, 1869; Stuart & Bridge, June 23, 1868, and reissue, and June 1, 1869; S. B. Sexton, Sept. 28, 1869, and Dec. 14, 1869; B. C. Bibb, July 20, 1869, and Nov. 23, 1869; B. C. Bibb & P. Klotz, No. 97,028, and No. 97,029, Nov. 23, 1869; P. Klotz, Nov. 23, 1869; Jno. J. Myers, Dec. 14, 1869, and case B of Bibb & Klotz, passed for issue Jan. 21, 1870; B. C Bibb, Sept. 14, 1869.

The 4th claim, for a divided screen which is pivoted and applied to the front top part of a base-burning fire-place heater, is found in the patent to Stuart & Bridge, June 1, 1869. (See also the stove of Bibb & Klotz, case B, passed for issue Jan. 22, 1870—no screen.)

The 5th claim, for a top-feed magazine with a guiding shute applied to a b. b. fire-p. heater, which has diving flues, and in which the top of the magazine forms the top of the stove, and in which the products of combustion circulate around the outside of the lower part of the magazine, appears to be anticipated in the stove of A. K. Sanders, July 14, 1868, Stuart & Bridge, June 1, 1869, and S. B. Sexton, Dec, 14, 1869. (App'n.)

The 6th claim is for a top-feed base-bur. fire-p. heater, in which the flame circulates around the lower part of the magazine, and which has a gas-escape passage at the top of the magazine, and it is found in the base-burning fire-place heaters of Sam. B. Sexton, Sept. 28, 1869, and Dec. 14, 1869, and in a pending application. (S. B. S.)

The 7th claim is a broad claim for a movable screen applied to a top-feed, base-burning, fire-place heater, and is anticipated in the patents — Stuart & Bridge, June 23, 1868, and reissue, and
239 June 1, 1869; S. B. Sexton, Sept. 28, 1869, and Dec. 14, 1869; B. C. Bibb, July 20, 1869; P. Klotz, Nov. 23, 1869; Bibb & Klotz, Nov. 23, 1869; J. J. Myers, Dec. 14, 1869, and also in pending applications of D. Stuart & R. Petersen, and B. C. Bibb & Philip Klotz, now in interference on a claim for this feature. (See also case B. Bibb & Klotz, passed for issue Jan. 21, 1870.)

A patent is refused.

L. DEANE, *Examiner.*

Endorsed: $\frac{3}{2}\frac{8}{6}$. Off. Mar. 4, 1870.

To the hon'ble Commissioner of Patents.

SIR: We have your favor of the 4th inst. in respect to Wm. Burrows' application for a patent on a fire-place base-burning stove, and we have to request that an interference be declared between

said Burrows' application and all of the cases referred to by you in said letter as anticipating the invention claimed by said Burrows.

Very respectfully,

MASON, FENWICK & LAWRENCE,
Att'ys for B. C. Bibb, Assignee of W. Burrows.

Mar. 10, 1870.

P. S.—We did not find screens in Bibb & Klotz model, passed for issue January 21st, 1870, "case B," but the drawing and specification may show such. We merely mention the fact so that if a mistake has been made it may be corrected now.

Very respectfully, M., F. & L.

240 Endorsed: $\frac{96}{20}$. Wm. Burrows, att'ys to office. Filed Mar. 10, 1870. Wm Burrows' base-burning stove. Request for declaration of interference. (Patent Office, March 10, 1870.)

No. 1. U. S. PATENT OFFICE,
WASHINGTON, D. C., *March* 4, 1870.

William Burrows, care Mason, Fenwick & Lawrence, Washington, D. C.

Please find below a communication from the examiner concerning your application for a patent for a base-burning fire-place heater, filed Dec. 4, 1869.

Very respectfully,

——— ———,
Commissioner.

EXAMINER'S ROOM No. 100.

The applicant is informed in reply to attorney's letter of 10th inst. that his inference that case B of Bibb & Klotz does not show the divided screens is correct. It will not, therefore, be included in the proposed interference on that point; nor will any interference be declared on that claim until the result of the interference between Bibb & Klotz, case A (in which attorneys in this application are the attorneys), and Stuart & Peterson for the same
241 feature shall be made known. The successful party in that interference will then be placed in interference with this applicant and any other applicant or patentees showing the same feature.

L. DEANE, *Examiner.*

Endorsed: $\frac{96}{20}$. Official. March 11, 1870.

(Interference cases.)

DEPARTMENT OF THE INTERIOR,
U. S. PATENT OFFICE,
WASHINGTON, D. C., *March* 29, 1870.

SIR: Please find below a communication concerning your application for a patent for a fire-place heater, filed Dec. 4. 1869.

Very respectfully,

. . ——— ———,
Commissioner.

Wm. Burrows, care Mason, Fenwick & Lawrence, Washington, D. C.

EXAMINER'S ROOM No. 100.

In the matter of the alleged invention above referred to, notice is hereby given to the parties hereinafter named that their claims are adjudged to interfere with each other, and that a hearing will be granted them on the 2d Tuesday of August, 1870, and that the testimony of the respective parties must be closed previous to the days hereinafter specially designated, it being understood that
242 the party first making application will be deemed the first inventor, in the absence of proof to the contrary.

Rebutting testimony, but no other, may be taken after the closing of the testimony-in-chief, but the same must be closed previous to the 1st Tuesday of August, 1870.

All testimony must be taken, &c., in accordance with the printed rules herewith transmitted.

David Stuart & Richard Peterson, assignees of D. Stuart & L. Bridge, of Philadelphia, Pa.; Howson & Son, Washington, D. C., their attorneys. Application filed March 14, 1868; patented June 23, 1868; reissued August 17, 1869. Their stove has the top-feed which is shown in the stoves of all the parties to this interference; also the magazine having a circulation space around it and a gas-escape passage above it, as claimed in the 6th claim of Burrows and shown in the stoves of Sexton, Martino, Bibb, Bibb & Klotz, and Philip Klotz. Their testimony will close on the 4th Tuesday of July, 1870.

Jno. M. Thatcher, of Bergen, Hudson Co., New Jersey; F. C. Treadwell, Jr., 335 Broadway, New York, his attorney. First application filed March 24, 1868; 2d application filed Nov. 16, 1868; patented Dec. 22, 1868; 3d application filed March 27, 1869; patented June 15, 1869. His 1st claim is for the top feed which is shown in the stoves of all the parties to this interference. His testimony will close on the 3d Tuesday of July, 1870.

Abraham K. Sanders, of Brooklyn, New York; Lemuel W. Serrell, New York, his attorney. Application filed April 16, 1868; patented July 14, 1868. His stove has the top feed which is shown in the stoves of all the parties to this interference. It has also the magazine with a circulation space around it, and with the top of the magazine forming a part of the top of the stove, as claimed in the

5th claim of Burrows and shown in the stoves of Bibb, Nos. 94320 and 94700, and Martino. His testimony will close on the 2d Tuesday of July, 1870.

243 David Stuart and Lewis Bridge, of Philadelphia, Penn.; Howson & Son, Washington, D. C., their attorneys. Application filed Feb. 24, 1869; patented June 1, 1869. Their stove has the top feed which is shown in the stoves of all the parties to this interference. Their testimony will close on the 1st Tuesday of July, 1870.

Bentley C. Bibb, of Baltimore, Md.; Mason, Fenwick and Lawrence, Washington, D. C., his attorneys. (His patents, Nos. 99525, 92781, 95320, 94700, 99026, and 97956). First application, Bibb & Klotz, filed Mar. 22, 1869; patented Feb. 8, 1870; 2d, B. C. Bibb, filed June 19, 1869; patented July 20, 1869; 3d, P. Klotz, filed July 30, 1869; patented August 31, 1869; 4th, B. C. Bibb, filed Aug. 16, 1869; patented September 14, 1869; 5th, B. C. Bibb, filed Oct. 25, 1869; patented Nov. 23, 1869; 6th, Jno. J. Myers, filed Nov. 13, 1869; patented Dec. 14, 1869. His stoves all have the top-feed, and those in his patents, Nos. 94320 and 94700, show the circulation space around the magazine, the top of which forms a portion of the top of the stove, as shown in the stoves of Sanders, Martino, & Burrows, and claimed in the 5th claim of Burrows' application. Some of his stoves show also the magazine having a circulation space around it and a gas-escape passage above it, as shown in the stoves of Stuart & Peterson, Sexton, Klotz, Bibb & Klotz, Martino, and Burrows, and claimed in the 6th claim of Burrows. His testimony will close on the 4th Tuesday of June, 1880.

Samuel B. Sexton, of Baltimore, Md.; Knight Brothers, Washington, D. C., his attorneys. First application filed May 25, 1869; patented Sept. 28, 1869, No. 95274; 2d application filed Nov. 23, 1869; patented Dec. 14, 1869, No. 97970. His stoves show the top feed, and also the magazine having a circulation space around it and a gas-escape above it, as shown in the stoves of Bibb, Bibb & Klotz,

244 Philip Klotz, Martino, Stuart & Peterson, and Burrows, and claimed in the 6th claim of Burrows. His testimony will close on the third Tuesday of June, 1870.

B. C. Bibb and P. Klotz, of Baltimore, Md.; Mason, Fenwick & Lawrence, Washington, D. C., their attorneys. Application filed Oct. 26, 1869; patented Nov. 23, 1869, No. 97029. Their stove has the top feed, and also the magazine, having a circulation space around it and a gas-escape passage above it, as shown in the stoves of Bibb, Klotz, Sexton, Martino, Stuart & Peterson, and Burrows and claimed in the 6th claim of Burrows. Their testimony will close on the 2d Tuesday of June, 1870.

Philip Klotz, of Baltimore, Md.; Mason, Fenwick & Lawrence, Washington, D. C., his attorneys. Application filed Oct. 26, 1869; patented Nov. 23, 1869, No. 97094. His stove has the top feed and the magazine, having a circulation space around it and a gas-escape passage above it, as shown in stoves of Bibb, Bibb & Klotz, Sexton, Martino, Stuart & Peterson, and Burrows and claimed in the 6th

claim of Burrows. His testimony will close on the 1st Tuesday of June, 1870.

William Burrows, of Brooklyn, New York; Mason, Fenwick & Lawrence, Washington, D. C., his attorneys. Application filed Dec. 4, 1869. His 3d claim is for the top feed in a fire-place fuel-magazine stove, and this is shown in the stoves of all the parties to this interference. His 5th claim covers what is shown in the stoves of Jno. Martino, patent No. 100,539, B. C. Bibb, No. 94700, and 94320, and A. K. Sanders. His 6th claim embraces what is shown in the stoves of Stuart & Peterson, Sexton, Martino, Bibb, Bibb & Klotz, and Klotz. This interference is declared at the request of this applicant, but his 1st, 2d, 4th, and 7th claims for the screen over the top feed are not now placed in interference, because two parties who claim that feature are already in interference. On the decision
245 of that interference all the parties to this interference whose devices have the screen will be placed in interference with the successful party. This applicant's testimony will close on the 5th Tuesday of May, 1870.

Jno. Martino, of Philadelphia, Penna. His 1st application filed Jan. 4, 1870; patented May 8, 1870. Mason, Fenwick and Lawrence, Washington, D. C., his attorneys. 2d application filed Feb. 5, 1870. Howson & Son, Washington, D. C., his attorneys. Both his stoves show the top feed, and one of them has the parts shown in stoves of B. C. Bibb, 94320 and 94700, A. K. Sanders, and Wm. Burrows and claimed in the 5th claim of Burrows. It also has the circulation space and gas-escape passage, as shown in the stoves of Sexton, Bibb, Bibb & Klotz, Stuart & Peterson, and Burrows and claimed in the 6th claim of Burrows. His testimony will close on the 4th Tuesday of May, 1870.

L. DEANE, *Examiner.*

Endorsed: $\frac{2}{2}\frac{6}{0}$. Off. Mar. 29, 1870. Int'f.

In the matter of the interference between my application for a patent on a base-burning fire-place stove, and numerous other patents and applications for a similar invention.

To the honorable Commissioner of Patents.

SIR: I hereby respectfully request that the application of Bibb & Klotz, filed March 22d, 1869, and now in interference with Stuart & Bridge, be added to the interference declared between my application and the numerous patents and applications above alluded to.

246 I also request that the pending application of Stuart and Bridge, which is now in interference with Bibb & Klotz, be also added to the interference, and also all cases claiming or showing divided screens and top feed hole for fire place stoves.

My desire is to make one interference embrace all of my claims. It seems to me but just to all parties that the trial of one interference should settle all matters of controversy involved.

The office is aware that great expense has already been incurred in an interference between Bibb & Klotz and Stuart & Bridge, the issue involved being one feature only of the invention.

It would, therefore, be hard on these parties, and on me also, to compel them and me to try two more interferences, one involving the screen and another the top-feed hole. This is especially the case when the proof which will be taken on the top feed will almost necessarily establish the date of the screen also.

I most earnestly ask the office to save me and all concerned from unnecessary litigation and expense and delay by making a single issue of the whole matter of my application.

I have the honor to be, very truly your obedient servant,

WM. BURROWS,
By MASON, FENWICK & LAWRENCE,
Attorneys for Assignee.

Endorsed: $\frac{9}{20}$. Wm. Burrows' att'ys to office. Filed Apr. 20, 1870. S. & P. included in int'f. Same date as requested. Wm. Burrows to Patent Office. (Patent Office, Apr. 18, 1870.)

The request to include the screen interference in this interference was declined.

247

U. S. PATENT OFFICE,
WASHINGTON, D. C., *April* 19, 1870.

Wm. Burrows, care Mason, Fenwick & Lawrence, Washington, D. C.:

Please find below a communication from the examiner concerning your interference with Stuart & Peterson *et al.*, declared March 29, 1870.

Very respectfully,

——— ———,
Commissioner.

EXAMINER'S ROOM No. 100.

The parties to this interference are notified that under the enumeration of the cases of B. C. Bibb, his application, case A, filed March 22, 1869, is included.

L. DEANE, *Examiner.*

Endorsed: $\frac{9}{20}$. Off. Apr. 19, 1870.

No. 1.

U. S. PATENT OFFICE,
WASHINGTON, D. C., *April* 20, 1870.

Wm. Burrows, care Mason, Fenwick & Lawrence, Washington, D. C.:

Please find below a communication from the examiner concerning your interference, declared March 29, 1870, with Stuart & Peterson *et al.*

Very respectfully,

——— ———,
Commissioner.

248 EXAMINER'S ROOM No. 100.

The application of Stuart & Peterson, filed July 27, 1869, for a reissue of their patent No. 79275 of June 23, 1868, is included in the interference. The divided screen is the subject of another interference, and the request of this applicant in his letter filed 18th inst. to include it in this interference cannot be acceded to.

L. DEANE, *Examiner.*

Endorsed: $\frac{96}{20}$. Off. Apr. 20, 1870.

No. 1. WASHINGTON, D. C., *Nov. 25th*, 1870.

To the honorable Commissioner of Patents.

SIR: In the matter of Wm. Burrows' application for a patent on a base-burning stove, filed Dec. 4th, 1869, assigned to me, I hereby formally renew the same, and respectfully request that the claims be examined and reported upon in view of the agreement between the parties to the late interference.

B. C. BIBB, *Assignee*,
By his agents, MASON, FENWICK & LAWRENCE.

Endorsed: $\frac{96}{20}$. Wm. Burrows. Renewal and request for a re-examination. F'd 25 Nov., 1870. (Patent Office, U. S. A., Nov. 25, 1870.) Wm. Burrows. Base-burning stove. Formal renewal.

249 No. 1.—2d. U. S. PATENT OFFICE,
WASHINGTON, D. C., *Dec.* 2, 1870.

Wm. Burrows, care Mason, Fenwick & Lawrence, Washington, D. C.:

Please find below a communication from the examiner concerning your application for a patent for a "base-burning stove," filed Dec. 4, 1869.

Very respectfully,

——— ———,
Commissioner.

EXAMINER'S ROOM No. 100.

In this case, under date of Nov. 25, 1870, applicant files a renewal and a request for a re-examination.

According to the best of his recollection, the examiner derived information in conversation with several parties to the interference declared March 29, 1869, about the time of the dissolution of that interference, to the effect that all the parties in interest had waived all claims in interference in favor of J. M. Thatcher. The written agreements and transfers in the case were never submitted to the examiner.

It is believed that all subsequent actions in the case were made in conformity with this understanding; consequently the office cannot reconsider the subject-matter of those claims. If the case shall be so amended as to eliminate all but the claims for the screen, this applicant may be placed in interference with Stuart & Peterson,
250 who, in the interference of Bibb & Klotz, S. B. Sexton, and Stuart & Peterson, were awarded priority for that feature. See claim in their reissue of May 21, 1870.

L. DEANE, *Examiner.*

Endorsed: $\frac{96}{20}$. Off. Dec. 2, 1870.

WASHINGTON, D. C., *Dec. 6th*, 1870.

Hon. Commissioner of Patents:

SIR: In the matter of Wm. Burrows' application for a patent on a magazine fire-place stove, filed Dec. 4th, 1870, I would say in response to your letter of Dec. 2, 1870, that I understood that a claim to a top feed hole specifically was to be granted to Mr. Thatcher, and that I understood also that a claim to the screen cover in combination with the top feed hole was to be granted to Stuart & Peterson, but I did not understand that these claims precluded me from securing by patent all such features of construction which might be found to be new and peculiar to Burrows' stove and different from other stoves, whether in the interference or out of the interference.

All I ask for is a patent on such claims as do not cover specifically the top feed hole nor the combination of the same with hinged screens.

Very respectfully,

B. C. BIBB, *Assignee of William Burrows*,
By MASON, FENWICK & LAWRENCE, *Agents*.

Endorsed: $\frac{9}{2}\frac{6}{0}$. Assignee to off. F'd Dec. 7, 1870. (Patent Office, U. S. A., Dec. 6, 1870.)

251 No. 1. U. S. PATENT OFFICE,
WASHINGTON, D. C., *Dec.* 7, 1870.

Wm. Burrows, care Mason, Fenwick & Lawrence, Washington, D. C.:

Please find below a communication from the examiner concerning your application for a patent for a "base-burning stove," filed December 4, 1869.

Very respectfully,

——— ———,
Commissioner.

EXAMINER'S ROOM No. 100.

Applicant's communication of 6th inst. has been received.

It appears on examination of the papers in the interference declared March 29, 1869, at the request of this applicant—some of which were never before brought to the notice of the examiner—that on the 18th of May, 1870, he formally withdrew his application.

By this act compliance with the request contained in assignee's communication of 6th inst., above referred to, is rendered impossible.

The office letter of 2d inst. was written without a knowledge of the terms of the withdrawal above referred to.

L. DEANE, *Examiner*.

Endorsed: $\frac{9}{2}\frac{6}{0}$. Off. Dec. 7, 1870.

252 *State of App'n of Wm. Burrows at Date of Letter of Dec.* 2, 1870.

The 3d, 5th, and 6th claims are for the top feed, which was found in "the big interference" of March 29, 1870, to be the invention of Thatcher, and their claims must be rej., as fully anticipated by him.

The 1, 2, 4, and 7th claims are for the screen, which, in the in-

terference of Stuart & Peterson, Bibb & Klotz, and S. B. Sexton, was decided to be the invention of Stuart & Bridge, with whose pat. app't may, if he desires it, be placed in int'f.

Endorsed: $\frac{96}{20}$. Mem.

1869. No. —.

William Burrows, of Brooklyn, county of Kings, State of New York.

Base-burning stove.

Rec'd Dec. 4, 1869.
Petition, " " "
Affidavit, " " "
Specification, " " "
1 drawing, 3 sheets, " " "
Model, " " "
Cert. dep.
1 cash, $15, Dec. 4, 1869.
Add'l fee cert.
" " cash.
Examined, —.
2 issue.
4 patented, ——, 186–.
Recorded vol. —, page —.
Circular.
Mason, Fenwick & Lawrence, Washington, D. C.
253 Rejected March 4, 1870.
Letter, March 11, 1870.
Int'f., March 29, 1870.
Letter, April 19, 1870.
Letter, April 20, 1870.
Letter, Dec. 2, 1870.
Letter, Dec. 7, 1870.
Circular, Dec. 22, 1870.
Ex.: J. A. M., M. McK.

254 COMPLAINANTS' EXHIBIT BURROWS' ASSIGNMENT.

(65.)

(Vignette.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE.

To all persons to whom these presents shall come, Greeting:

This is to certify that the annexed is a true copy from the records of this office of an assignment recorded in Liber R 12, page 113, and that said annexed copy has been compared by me with the original, and that it is a correct transcript therefrom and of the whole of the original.

In testimony whereof I, W. H. Doolittle, Acting Commissioner of Patents, have caused the seal of the Patent Office to be hereunto

affixed this fifth day of February, in the year of our Lord one thousand eight hundred and seventy-eight, and of the Independence of the United States the one hundred and second.

[L. S.] W. H. DOOLITTLE,
Acting Commissioner.

255 Whereas I, William Burrows, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful improvement in top-feed fire-place stoves, and in divided hinged screens or covers for the top-hole feed of fire-place base-burning stoves for which I am about to make application for letters patent of the United States; and whereas B. C. Bibb, of Baltimore, Maryland, is desirous of acquiring all my interest therein, whether patented or not:

Now, this indenture witnesseth: That in consideration of the sum of one dollar in hand paid, the receipt whereof is hereby acknowledged, I have and do hereby assign all my right, title, and interest in and to the said invention, and any patent which may be granted therefor, the same to be held and enjoyed by the said B. C. Bibb and his legal representatives for the full end of the term for which any letters patent therefor may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not have been made.

Witness my hand and seal this sixteenth day of November, eighteen hundred and sixty-nine.

WILLIAM BURROWS. [SEAL.]

[Three 2-cent stamps, canceled.]

Witnesses:
WM. LYNCH.
R. W. FENWICK.

The words "top-feed fire-place stoves and in" were inserted before signing.

WILLIAM BURROWS. [SEAL.]

256 I, Jordan L. Mott, do hereby relinquish any right, title, and interest which I might possibly have had in the invention assigned by this instrument of writing by William Burrows to Bentley C. Bibb, — any interest which I might have had arising from William Burrows being my pattern-maker, and not from any part taken by me as an inventor, for I took no such part therein.

JORDAN L. MOTT.

[Three 2-cent stamps, canceled.]

Witnesses:
CHAS. HAMMANN.
SYLVESTER G. VAN DEUSEN.

STATE OF NEW YORK, }
City and County of New York, } *ss:*

On this 17th day of November, 1869, before me personally came William Burrows, to me known to be the individual described in and who executed the foregoing assignment, and acknowledged to me that he executed the same for the uses and purposes therein expressed.

[L. S.] CORNELIUS MINOR,
Notary Public, N. Y. County.

STATE OF NEW YORK, *City and County of New York:*

I, Charles E. Loew, clerk of the city and county of New York, and also clerk of the supreme court for the said city and county, the same being a court of record, do hereby certify that Cornelius
257 Minor, whose name is subscribed to the certificate of the proof or acknowledgment of the annexed instrument and thereon written, was at the time of taking such proof or acknowledgment a notary public in and for the city and county of New York, dwelling in the said city, commissioned and sworn and duly authorized to take the same; and, further, that I am well acquainted with the handwriting of such notary, and verily believe that the signature to the said certificate or proof of acknowledgment is genuine.

In testimony whereof I have hereunto set my hand and affixed the seal of the said court and county the — day of ——, 186–.

[L. S.] CHARLES E. LOEW, *Clerk.*

[Five-cent stamp, canceled.]

Recorded February 14th, 1870. Ex'd: C. C. W., F. F.

258 United States Circuit Court, Southern District of New York.

THE THATCHER HEATING COMPANY *et al.*

vs.

JOHN H. BURTIS and JOHN M. GRAFF.

Testimony taken for final hearing on behalf of the above-named defendants.

NEW YORK, *July* 30, 1878.

Present: F. C. Bowman, Esq., and W. H. L. Lee, Esq., counsel for complainants, and A. J. Todd, Esq., counsel for defendants:

WILLIAM BURROWS, examined on behalf of defendants, deposes and says as follows:

Q. 1. What is your name, age, residence, and occupation?

A. William Burrows; age, 40 years; reside at 206 South Fifth street, Brooklyn, N. Y.; occupation, pattern-maker.

Q. 2. Are you acquainted with J. L. Mott, of this city? If so, what length of time have you been acquainted with him?

A. Since 1858 I have been acquainted with him.

Q. 3. Did said Jordan L. Mott ever apply to you for the purpose of having made drawings and patterns of a fire-place heater containing a fuel magazine or feeder? If so, when did he so apply to you, and what did he request you to make in the way of drawings and patterns for such a heater?

259 A. He applied to me about the month of June or July, 1867, stating that he wished me to make drawings and patterns for a fire-place heater, with revertible flue, and a fuel magazine and a feed from the top.

Q. 4. When did you have the drawings of such heater completed and how do you fix the date?

Question objected to as far as it tends to show any prior knowledge on the part of the witness on the ground that the answer does not disclose the name of the person having such prior knowledge.

A. I had the drawings completed previous to August 10, 1867; I fix the date by a memorandum on my book, where I keep an account of work done.

Q. 5. When did you commence making the patterns from these drawings for said heater, and state how you fix such date.

A. I commenced making the patterns August 10, 1867; fix the date by referring to a book where I keep the time.

Q. 6. Will you please refer to this book and point out in what part of it such time was kept, and also permit such book to be marked as an exhibit for identification?

Page of book marked "Def'ts' Exhibit Burrows" for identification.

Q. 7. Explain the entry referred to by you in this time-book.

A. J. L. Mott Iron Works, August 10th, J. B. 1 day. This means that John Burrows commenced to work on these patterns.

Copy of this page offered in evidence as Exhibit Burrows No. 1.

Objected to by complainants' counsel as being incompetent.

Q. 8. When were these patterns completed, and how do you fix the date?

A. They were completed prior to 18th November, 1867. I fix the the date by the last payment I received in full. I take this from my cash-book:

260 J. L. Mott, heater patterns, to cost $350:

September 17.	Received on account	$50 00
November 2.	Received on account	50 00
" 7.	Received on account	50 00
" 16.	Received on account	50 00
" 18.	Received in full	250 00
		$450 00

The above is the entry from my cash-book.

Page of cash-book marked "Def'ts' Exhibit Burrows" for identification which contains the above entry, such book, as well as the time-book, to be produced whenever requested by counsel for complainants, and also to be present at the hearing of this cause.

Objected to as incompetent.

Q. 9. What was done with these patterns when they were completed, and for what purpose?

Question objected to so far as it calls for an explanation of the purposes intended.

A. They were delivered to the J. L. Mott Iron Works for the purpose of taking castings off or filing up as patterns to make heaters from.

Q. 10. What became of the drawings from which such patterns were made?

A. I don't know, but suppose they were destroyed after keeping them five or six years; that is our custom to destroy them after keeping them about that length of time.

Q. 11. In what way was the fuel magazine contained in this heater, with reference to the body or cylinder of the heater, as shown by the drawings and patterns which you so made?

Objected to on the ground that witness is not named in the answer, and the same objection is to be deemed to apply to the whole of the witness' testimony, as far as it affects prior use or knowledge; and, further, that the evidence is not competent, being secondary, the patterns and drawings themselves being the proper evidence.

261 A. It was placed inside of the outer cylinder or casing extending to the top of the heater and supplied with coal through an opening at the top.

Q. 12. Was this heater, as represented by said drawings and patterns, intended to protrude outward from the mantel as much as do the heaters which the defendants make and sell?

Objected to, first, as to form, and in that it is leading; second, in that it assumes a fact what has not been proved; third, that it calls for secondary evidence where the primary evidence should be produced and its absence has not been accounted for; fourth, as calling for the intention of some person or thing not designated, which intentions are not evidence.

A. Yes, sir; it was intended to project a sufficient distance in front of the mantel line or frame to permit of an opening being made so that the magazines could be supplied with fuel from the top and in front of the mantel line or frame.

Answer objected to by complainants' counsel as irresponsive.

Q. 13. When Jordan L. Mott gave you such ideas and directed you to make such drawing as you have testified, did you have any difficulty in making such drawings and patterns?

(Objected to as immaterial.)

A. None whatever.

Q. 14. Had you seen such a construction in the state of the art of stove-making anywhere; if so, where?

A. I had in the stove called the Littlefield Morning Glory. I had seen a great many stoves with openings at the top.

Q. 15. How was the magazine feed air ranged in the Littlefield Morning Glory stove, with reference to the outer casing, as such stove was made and sold prior and up to the year 1867?

262 Objected to on the ground that the stove itself would be the best and also proper evidence of its construction; that the evidence is incompetent, being secondary, and as being immaterial.

A. It was placed inside the outer casing, extending to the top, with an opening in the top to supply the magazine with fuel.

Q. 16. Please look at the stove now shown you, which is marked Defendants' Exhibit Burrows No. 2, and state whether that stove was made from the pattern which you so made and completed for Jordan L. Mott in the year 1867, as testified to by you?

Objected to as calling upon the witness to testify as to a fact not shown to be within his knowledge and for which no proper foundation has been laid, and as to work which the question itself assumes to have been done by other parties and not by the witness.

A. It was made from such patterns.

Stove or heater put in evidence as "Defendants' Exhibit Burrows No. 2, J. A. S., Ex'r.

Complainants' counsel consents that defendants' time for proofs be extended to and including February 7th, 1878.

Adjourned to Thursday, January 31st, 1878, at 12 m.

Met, pursuant to adjournment, at 37 Park Row, January 31st, 1878, at 12 m.

Counsel present as before.

Q. 17. Have you looked carefully for the drawings referred to by you in your testimony of yesterday, and have you found them?

A. I have looked carefully for them and failed to find them.

Witness cross-examined by B. F. LEE, Esq., counsel for complainants *de bene esse*, reserving all objections:

263 X Q. 18. Did you or did you not in the years 1868, 1869, or 1870 make an application to the Commissioner of Patents of the United States for a patent, and did you not on that occasion make oath before a notary public or other proper magistrate that you were the original and first inventor of the device described in said application?

A. I cannot remember the date correctly that you mention there; I can't answer yet till I understand your question.

X Q. 19. Question repeated.

A. If you will tell me what patent you refer to I will answer you. I think that in one of those years I made an application for a patent for a top-feed fire-place heater in my name, which I assigned to B. C. Bibb, of Baltimore, Maryland. I considered it my invention, because I had suggested the propriety and the utility of feeding the fire-place stove from the top to others of my customers before I was instructed by J. L. Mott to place it in his heater or stove.

X Q. 20. Please name each of the customers to whom you refer in your last answer.

A. M. C. Hull, W. Jackson & Son, Adam Hampton; I can't recollect the others; I made about twenty or thirty after that.

X Q. 21. Please state the residences and places of business of each of the persons mentioned in your last answer.

A. The place of business of M. C. Hull is in Third avenue between 23d and 24th streets, New York, or was about two years ago; I presume it is there yet. W. Jackson & Son have an office in Front street; I don't know the number. Adam Hampton, I presume, has got an office in heaven; he is dead.

X Q. 22. Can you name any more?

A. I do not recollect any more just at present.

X Q. 23. Have you any memorandum that shows or tends to show how many patterns of any kind you made for Jordan L. Mott or for any concern with which he was connected from the beginning of 1867 to the end of 1871?

A. Yes.

X Q. 24. Can you state how many of all kinds of stove or heating apparatus—if yea, do so—during the period inquired of in
264 the last question for the said Mott or his concern?

A. I could not tell without referring to my memorandum books.

X Q. 25. Have you those books here?

A. I have some of them.

X Q. 26. Which ones have you and what period do they cover?

A. I have one book here present that covers from the beginning of 1867 to the 4th of August, 1870.

X Q. 27. Answer cross 24, limiting it to the period just mentioned.

A. I would refuse to answer that question on the ground that it would expose Mr. Mott's business.

X Q. 28. Within the past twenty minutes you have looked through your book, have you not, and ascertained the number of patterns inquired about in X 27.

A. I have not ascertained the exact number of patterns; that would be impossible. In a store there might be fifty pieces of patterns or a hundred pieces, more or less, required to construct what we would call a set of fire-place stoves, heaters, or cooking ranges.

X Q 28. Question repeated.

A. I have looked through my book in the last twenty minutes. I have not ascertained the exact number of patterns.

X Q. 29. What have you ascertained by such examination?

A. I can't recollect all I have ascertained, as I have looked through twenty-five or thirty pages of a memorandum book.

X Q. 30. Did you not, while examining the book, take off a memorandum from the book on a separate piece of paper?

A. I did.

X Q. 31. What was contained in that memorandum and what did it indicate?

A. I refuse to tell what it contained; it would expose Mr. Mott's business; it indicated patterns made for J. L. Mott.

X Q. 32. How many separate pieces of work did it indicate?

A. I can't tell exactly. I have not looked at it since I put it in my pocket.

X Q. 33. Will you look at it and answer the question.

A. It indicates eight different sets of patterns.

265 X Q. 34. Do you mean to say that from the beginning of 1867 to the 4th of August, 1870, you made only eight different sets of patterns for Jordan L. Mott or any other concern with which he was connected?

A. To the best of my recollection that is all, and from memorandums.

X Q. 35. Point out by reference to your books the last set of patterns made for Jordan L. Mott or any concern with which he was connected made prior to August 4th, 1870.

A. I refuse to answer that on the ground that it would be exposing Mr. Mott's business.

X Q. 36. Will you please explain to the court upon what theory you consider that answering the last question would be exposing Mr. Mott's business.

A. In taking orders from Mr. Mott he places me under a ban of secrecy not to divulge to any one what patterns I am making for him; in the particular case the fire-place heater patterns which I constructed for him he has removed the injunction of secrecy, thereby permitting me to give evidence in relation to the date when they were constructed.

X Q. 37. Please describe the exact construction of the heating apparatus for which the last set of patterns were made by you for Jordan L. Mott or any concern in which he was interested prior to August 4th, 1870, and refer to your books, if necessary, to answer the question.

A. I should refuse to answer that on the same ground, as it would by exposing Mr. Mott's business.

X Q. 38. Did Mr. Mott remove this injunction of secrecy, as you call it, by letter or verbally?

A. Verbally.

X Q. 39. When was this?

A. Yesterday.

X Q. 40. Where?

A. In the J. L. Mott Iron Works, No. 90 Beekman street.

X Q. 41. What did he say to you, and what did you say to him, and at what time of the day was it on yesterday?

A. About half past eleven o'clock. I told him Mr. Burtis wished me to appear as a witness in this fire-place heater suit in re-
266 lation to the top feed; that Mr. Burtis requested me to testify in relation to the time or dates that I made the patterns for the J. L. Mott fire-place heater. He said, Very well; go and tell what you know about it.

X Q. 42. Is that all he said or you said?

A. No.

X Q. 43. What else?

A. I said, Good day; and he said "Good day, Bill."

X Q. 44. Have you stated all that he said and all that you said?

A. I have.

X Q. 45. What were these patterns made of which you say you made in 1867, between August 10th, 1867, and November 18th, 1867? Can you tell without referring to a book?

A. Yes; they were made of wood.

X Q. 46. Name all the workmen that worked on those patterns for you.

A. I cannot name all the workmen; myself and my brother worked on them principally.

X Q. 47. Name one workman who worked on them besides yourself, and give me his present residence as accurately as you can.

A. John Burrows; works at 90 Fulton street; I don't know his residence.

X Q. 48. Is he your brother?

A. He is.

X Q. 49. What is his present business?

A. Pattern-maker.

X Q. 50. State his last place of residence that you did know?

A. North Second street, Williamsburg, Brooklyn, E. D.; I do not know the number.

X Q. 51. What part of North 2nd street?

A. I don't know the number.

X Q. 52. Question repeated.

A. I don't remember.

X Q. 53. When did you last see him to speak to him?

A. About two hours and a half ago, at 90 Fulton street.

X Q. 54. How long ago did you know that your brother lived in North 2nd street, and for what period did he live there?

A. I can't distinctly recollect; I don't know for what period he did live there.

X Q. 55. Have you a good memory?

267 A. Pretty good when anybody owes me any money; I can generally remember it.

X Q. 56. Question repeated.

A. I consider I have.

X Q. 57. Name any other workman whom you had in your employ between August 10th, 1867, and November 18, 1867.

A. I think I only had myself, my brother, and a boy; that is all I recollect.

X Q. 58. Are you positive there were no others?

A. I don't think there were.

X Q. 59. Question repeated.

A. There was one other besides my brother and myself, a boy I mentioned above, William Case; I don't know where he resides; he was a pattern-maker, when last knew or heard of him, at 90 Fulton street.

X Q. 60. Where is your place of business?

A. No. 90 Fulton street.

X Q. 61. Where is your brother's place of business?

A. No. 90 Fulton street.

X Q. 62. Under what name is your business carried on?

A. Under that of William Burrows.

Counsel for complainants repeats each and every of the questions which the witness has refused to answer, and gives notice that in case they are not answered he will move at the hearing to strike out the deposition of this witness.

Defendants' counsel denies this right, and claims that if the complainants' counsel feels aggrieved, and desires that answers are material and necessary, he should apply to the court for relief as to whether the witness should be compelled to answer such questions.

Redirect:

R. D. Q. 62. Please state what is the last entry on Defendants' Exhibit Burrows No. 1 of work done on the patterns for such
268 fire-place heater—I mean the last date on which work was so done on such patterns, and by whom does the entry show the work was done?

A. It shows it was done by William Burrows November 16th, 1867.

R. D. Q. 63. In whose handwriting are all the entries to which you have referred in your examination?

A. They are all of them made in my handwriting that I have referred to in my examination.

R. D. Q. 64. Will you swear positively that each one of those entries was made at the very time such bears date, and that they have not been changed in any manner since they were first made?

A. I do.

R. D. Q. 65. Was a patent granted on the application referred to by you in your answer to X 19 question?

Objected to as incompetent.

A. Mr. Bibb told me it was not granted.

WM. BURROWS.

Adjourned to Friday, February 1st, 1878, at 10.45 a. m.

Adjourned to Saturday, February 2nd, 1878, at 11 o'clock a. m.

A. About half past eleven o'clock. I told him Mr. Burtis wished me to appear as a witness in this fire-place heater suit in re-
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X Q. 42. Is that all he said or you said?

A. No.

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A. It shows it was done by William Burrows November 16th, 1867.

R. D. Q. 63. In whose handwriting are all the entries to which you have referred in your examination?

A. They are all of them made in my handwriting that I have referred to in my examination.

R. D. Q. 64. Will you swear positively that each one of those entries was made at the very time such bears date, and that they have not been changed in any manner since they were first made?

A. I do.

R. D. Q. 65. Was a patent granted on the application referred to by you in your answer to X 19 question?

Objected to as incompetent.

A. Mr. Bibb told me it was not granted.

WM. BURROWS.

Adjourned to Friday, February 1st, 1878, at 10.45 a. m.

Adjourned to Saturday, February 2nd, 1878, at 11 o'clock a. m.

SATURDAY, *February 2nd*, 1878.

Met pursuant to adjournment.

Re-examination of witness WILLIAM BURROWS:

R. D. Q. 66. Have you asked Mr. Mott if he had no objection to make to your answering X 24 question, and what was his reply in substance?

A. I have. He said he had no objection to my answering any question in relation to the patterns made during that period.

R. D. Q. 67. Then please answer X 24 question, limiting the answer in accordance with cross-question 27 to August, 1870.

A. I made one set of fire-place heater patterns complete August, 1867, and one set of two-hole range patterns October, 1868; done three and one-half days' work; I don't remember what it was on. August, 1867, is the time I commenced the heater patterns. October, 1868, is wrong for the two-hole range patters; it
269 should be January, 1868. September, 1869, I made hot-closet patterns for "Defiance range." September, 1869, I did some work on stoves; I don't know what work it was. September, 1869, did 16½ hours' work on fire-place heater; to the best of my recollection the work was done in making alteration on the grate. March, 1870, made a flat-iron heater pattern. 1870 made elevated oven-range patterns; one set of hot-closet patterns; that is all.

R. D. Q. 68. Between the years 1867 and 1870 did you make a complete set of patterns for a heater for Mr. Mott other than the set of heater patterns which you say you commenced for him in August, 1867, and finished in the fall of that year, as testified to by you?

Objected to as leading and as already answered and as irrelevant.

A. No, I did not; that is the only set of fire-place heaters I ever made for Mr. Mott.

Recross-examined:

R. X Q. 69. When you answered the R. D. Q. 67 you testified from a memorandum, did you not?

A. I testified from a memorandum copied from my time-book of those years.

R. X Q. 70. Where is that time-book?

A. Here it is.

(Witness produces a book.)

R. X Q. 71. Will you produce the memorandum?

A. Here it is.

(Witness produces a paper.)

Memorandum referred to as produced by the witness and marked for identification Exhibit Burrows' Memorandum.

R. X Q. 72. I see on this memorandum an entry in these words: "March, 1870, flat-iron heater;" please point out in your time-book what entry you took that from.

Witness shows the entry, of which the following is a copy:

(J. L. Mott Iron Works, flat-iron heater, $175.00. March 14, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 29, 30, 31.)

270 R. X Q. 73. Please point out the entry of January 3d, 1868, referred to in "Exhibit Burrows' Memorandum."

Witness points out the entry as requested, and it is in the following words, and a fac-simile:

J. L. Mott.

Two hot ranges		$300 00
Jan'y 3. Rec. on acc't	$50	
" 11. Rec. on acc't	50	
Feb'y 3. Rec. on acc't	50	

R. X Q. 74. Point out each of the other entries in your time-book from which Exhibit Burrows' Memorandum was taken.

Cross-examination of this witness suspended, witness to be reproduced for further cross-examination.

JORDAN L. MOTT, being produced on behalf of defendants and duly sworn, deposes and says:

Q. 1. What is your name, age, residence, and occupation?

A. Jordan L. Mott; 48 years old; New York city; iron founder.

Q. 2. Did you ever have made drawings and patterns of a fire-place heater containing a fuel magazine or feeder; if so, by whom and when were the patterns completed?

A. Yes; they were made by William Burrows in the fall of 1867.

Q. 3. Did you have castings taken from said patterns; if so, when?

A. We had castings taken from the wood patterns in the latter part of 1867, or in January, 1868.

Q. 4. What was done with such castings?

A. The castings were mounted and put in my house.

Q. 5. When were such castings so mounted commenced to be used in your house?

Objected to as assuming what is not proved.

A. It would be hard for me to state the exact date. They were placed in my house within a short time after being mounted
271 and during cold weather, during the months of either January or February, 1868; they were used immediately after being placed in my house.

Q. 6. Did such castings so mounted and so used constitute a complete fire-place heater or not?

A. They did.

Q. 7. How did such fire-place heater operate in practice?

A. Very satisfactorily; the object of placing it there was for trial.

Q. 8. How long did you continue to use such fire-place heater in your house?

A. That winter and the winter following.

Q. 9. When were more of the same construction of fire-place heater got out at your foundry, and into whose hands did the first of such additional fire-place heaters go?

A. The first one that I have found record of was sent from our foundry to our store on the 27th of May, 1868; this one afterwards went to Mr. Augustus F. Weeks—to his house in Williamsburgh. Mr. Weeks was at that time president of the J. L. Mott Iron Works. The next one I find came to our store on the 22d of June, 1868. I can't tell at present who got this one. I see from a memorandum of Mr. Weeks' that he ordered two, for on the 27th of May, the date on which the first one was received, I find a memorandum as follows: "New York, May 27th, 1868. I am very glad that you have sent the fire-place heater. Now have the kindness to send me one more just as soon as you can; we want to set them if possible this week, and I wish to send them both over to the house at the same time." This is in Mr. Weeks' handwriting.

Q. 10. Plese look at Defendants' Exhibit Burrows No. 2, and state how such fire-place heater or stove compares with or differs from the heater which you testify you used, and also the two which you say came to your store subsequently.

A. It is the same, identical.

Q. 11. Did you keep the wood patterns of this fire-place heater; and, if so, will you produce them?

A. I presume they are in existence. They may have been destroyed. If I have them I would be only too glad to produce them; I will look for them.

272 Q. 12. Were more of these heaters cast at your foundry; and, if so, about how soon after these first three, and what was done with them?

A. More were made at our foundry and sold upon the market.

Q. 13. You have stated that the object of placing the first fire-place heater in use in your house was for trial; please state what is the custom in this respect with stove manufacturers?

A. The custom is with us and with others to thoroughly test the stoves manufactured for the purpose of ascertaining their efficiency as a heating apparatus and to test the strength of the different plates. I tested this heater two winters before putting them on the market.

Q. 14. Did Mr. Burrows ever make more than one set of patterns for a fire-place heater for you?

A. No; he made one set only—one complete set.

Q. 15. What were you to pay Mr. Borrows for that set of patterns and what did you pay him?

A. I was to pay him $350; I did pay him $450.

Q. 16. Will you please refer to your receipt-book and give the date of these payments to Mr. Burrows for this set of patterns, as shown by his, Burrows', receipts?

A. On September 17th, 1867, I paid him $50, according to this receipt-book; on November 2nd, 1867, I paid him $50 additional; November 7th, 1867, I paid him $50 more; November 12th I paid him $50 more; and on November 18th, 1867, I paid him $250, and got his receipt in full for this set of heater patterns.

Copies of receipts put in evidence as Defendant's Exhibit Mott No. 1, the originals to be produced if desired by complainants' counsel.

Q. 17. How near is your residence in which the first of these fire-place heaters — to your foundry in which it was cast?

A. Adjoining.

Q. 18. Did you tell Mr. Burrows what you wanted in the way of a fire-place heater when you requested him to make drawings, from which were made up said patterns which you have referred to?

273 A. The general plan, I did.

Q. 19. Were such ideas as conveyed by you to said Burrows new or old; I mean the principle of embodying in a stove or heater, within the cylinder thereof, a suspended magazine feed coming up to the top of the stove or heater, and with a hole in the top casing for putting in the coal in such magazine feed?

A. They were not.

Q. 20. If such ideas were old, where were they to be found, in stoves or heaters at that date—namely, in and prior to the year 1867?

A. In the various self-feeding stoves that were made at that time—the Morning Glory, the Oriental, and many other stoves.

Q. 21. Please look at the stoves now shown you and marked Defendants' Exhibit Mott No. 2, and state whether it is one of the class of stoves referred to in your last answer.

A. Yes; it is one of the class.

(Stove put in evidence and marked Defendants' Exhibit Mott No. 2.)

Q. 22. Was the stove or heater marked Defendants' Exhibit Burrows No. 2 made from the wood patterns which Mr. Burrows made for you in the year 1867?

A. I can't say whether it was made from the wood patterns or iron patterns, but it was made from the patterns made for me by Burrows; we took off iron patterns from the wood patterns made by Burrows, and worked from the iron.

Further examination of witness adjourned to 11 o'clock Monday, 1878.

MONDAY, *February* 4, 1878.

Q. 23. Have you made search for the wood patterns for use in said foundry in the manufacture of the fire-place heaters, you having been requested, by virtue of an understanding between the counsel, to look for the patterns of the magazine feed cylinder and top of heater only?

A. I have; I have been unable to find the wood patterns as yet.

274 Q. 24. Have you found any of the iron patterns taken from the wood patterns, and which were used in the manufacture of heaters in your foundry?

A. I have; I have found the feeder, the grate and the grate-rest, and the fire-pot; and have brought here the feeder. The rest of the iron patterns of this heater have been destroyed, because they occupied too much room in our lofts, and we were not manufacturing heaters from this pattern; we retained such parts as would probably be required for repairs.

Counsel for defendants puts in evidence the iron patterns of the magazine feed, produced by the witness, as Defendants' Exhibit Mott No. 3 (said pattern being in two pieces).

A. I found some of the flasks from which were cast a front of the cylinder of the stove, but I did not bring them, as I thought they could not be of any possible use.

Q. 25. Have you any memorandum or other record in writing of the making of the first heater which you just put up in your own house as you have testified; and if not, why not?

A. I have not; my house is located within the same enclosure as the foundry, and the entrance to my house is not a minute's walk from the entrance to the foundry; I had the heater taken from there to the house for trial and made no memorandum of it.

Cross-examination by B. F. LEE, counsel for complainants:

X Q. 26. From the time that you received the wooden patterns from Mr. Burrows down to the time that the first heater was made from the wooden patterns, were there not a number of alterations made in the wooden patterns?

A. No, sir.

X Q. 27. Can you state positively that there were no alter-

275 ations made in the wooden patterns during that period?

A. I would like to know what you mean by an alteration; there were undoubtedly slight cuttings made for the convenience of molding.

X Q. 28. Were there no other changes than those you have mentioned, and is your recollection upon this point distinct and positive?

A. There were no other changes; my recollection is as positive as any man's can be after eleven years, from the fact that we try the stoves as made before we alter them.

X Q. 29. Can you swear positively that when those patterns first came from Burrows', they were in proper shape, so that they could be put together?

A. I cannot, sir.

X Q. 30. Have you any particularly distinct recollection in regard to these fire-place heater patterns more than you would have of any details of business occurring ten years ago?

A. Yes, sir.

X Q. 31. How many stove or heater patterns of various kinds was the J. L. Mott Iron Works at that time in the habit of having made, say, in a year?

A. That is impossible to tell.

X Q. 32. Give your best estimate.

A. I cannot give an estimate, because we are making patterns all the time; I don't think that we were making patterns for heaters that year but these; don't think we were making any stove patterns, except a little range which he never took a casting of.

X Q. 33. Was the J. L. Mott Iron Works at that time a corporation?

A. Yes, sir.

X Q. 34. In what county and under what law was it organized?

A. Under the general law organizing corporations in Westchester county.

X Q. 35. When you first spoke to William Burrows about making these patterns, state what you said to him and what he said to you—give the substance as near as you can?

A. That would be a hard thing to do; Burrows was at me to make these patterns before my father died.

276 X Q. 36. Can you not state the substance of what you said to him?

A. No, sir.

X Q. 37. Do you remember ordering the patterns particularly, and can you state where the order was given?

A. I believe the order was given in my store in Water street; I have a distinct recollection of ordering the patterns.

Redirect:

R. D. Q. 38. Why can you not swear positively that when those patterns first came from Burrows they were in proper shape so that they could be put together?

A. Because I did not personally attempt to put them together.

R. D. Q. 39. Was the getting out of the castings for your fire-place heater first commenced to be used by you, as testified either in December, 1867, or January, 1868, delayed by reason of any changes or alterations in those wood patterns?

A. They may have been delayed by alterations or drafts for convenience of molding and the making of flasks; no other delays.

R. D. Q. 40. When did your father die?

A. On the 8th day of May, 1866.

R. D. Q. 41. You say Burrows was applying to you to make these patterns before your father died; did you have any conversation with any other party about getting up such patterns before you communicated your ideas to Mr. Burrows; if so, with whom?

A. With my father.

Recross:

R. X. Q. 42. Have you contributed in any way to the defense of this suit or are you interested therein, directly or indirectly, adversely to the complainants?

A. Not a cent—not in any manner interested except as a witness.

R. X. Q. 43. Do you belong to any combination to resist or to aid in resisting this or any other stove or heater patents?

A. I do not, sir.

JORDAN L. MOTT.

Adjourned to Tuesday, February 5th, at 12 m.

277 Met, pursuant to adjournment, Tuesday, February 5th, 1878.

WILLIAM C. LESSTER, being produced on behalf of defendants, and duly sworn, deposes as follows:

Q. 1. What is your name, age, residence, and occupation?

A. William C. Lesster; forty-four years old; 232 West 52d street, New York city; not in business at present.

Q. 2. Please look at the fire-place heater now shown you and marked "Defendants' Exhibit Lesster No. 1," and state when you first commenced to make and sell such fire-place heaters.

A. To the best of my knowledge it was in 1866. I had them made before the patent was out. The patent I referred to is dated January 29, 1867, No. 62623.

Q. 3. Where was your place of business in the year 1869?

A. 1279 Broadway, New York city.

Q. 4. I see in the drawing of your patent there is shown a perforated top, and in the heater, "Defendants' Exhibit Lesster No. 1" there is not shown such perforated top; which way did you make them in the year 1866?

A. Both ways; the perforated I used a great many years before 1866 on another heater.

Q. 5. Was this a successful heater in use, and did you introduce them to any extent from the year 1866 on?

A. It was successful in use, but not many were sold or used the first year. We sold them, sold them subsequently, but not very extensively—5 or 6 a year on the average.

Q. Did you ever introduce into said fire-place heater a magazine feed suspended within the cylinder or body of the heater from its top portion and feed through the top of the heater; if so, when did you first make and sell such a construction of heater?

A. About the year 1870—I am not certain about that—about that year, I think.

Q. 7. What change had you to make in the heater, "Defendants' Exhibit Lesster No. 1," in order to introduce such magazine feed and top feed hole?

278 A. Cut off the top and put in the feeder with slide, which latter I put in as an extra precaution on account of gas.

Q. 8. Will you produce such a magazine feed and slide as you refer to, together with the portion of the heater cylinder into which such magazine feed was introduced?

A. I do here produce it.

Defendants' counsel puts in evidence the Lesster heater as "Defendants' Exhibit No. 1;" also puts in evidence the magazine feed, slide, and portion of heater cylinder just produced by the witness as "Defendants' Exhibit Lesster No. 2."

Q. 9. At the time you introduced this magazine and top-feeding construction in your heater was such construction well known to you? If so, when did you know of its existing.

A. I don't know of its existing anywhere.

Q. 10. You do not understand my question. I do not ask you as to your heater existing with it previously, but whether you knew of a construction of magazine feed, and hole in the top for introducing the coal into such magazine feed from the top, anywhere previous to your embodying it in your stove or heater; and, if so, where?

A. I can't answer, because I don't know. I might have seen or might not, for I did not think anything of its importance when I made it, otherwise I would have got a patent for it.

Q. 11. Were you not aware that previous to your introducing into your stove or heater of a magazine feed that such a construction of magazine feed existed in outstanding stoves, such as the "Morning Glory," and other stoves, and that such stoves were fed from the top, substantially as was the case in your stove or heater "Defendants' Exhibit Lesster No. 1," with "Defendants' Exhibit Lesster No. 2" added to it?

A. I remember one; I don't know whether it was the "Morning Glory." It was Littlefield's heater, and was used in railroad cars and elsewhere, in houses, &c.

279 Q. 12. Did that construction of stove differ from your construction of heater, with "Defendants' Exhibit Lesster No. 2" added, so far as the magazine feed being suspended within the cylinder or body of the stove and its being fed in from the top are concerned?

A. It was the same, as near as I can think.

Counsel for complainants seasonably objected to the examination of this witness concerning prior knowledge of the plaintiffs' invention, because he is not properly named in the answer.

W. C. LESSTER.

DAVID TOMPKINS, being produced on behalf of defendants and duly sworn, deposes as follows:

Q. 1. What is your name, age, residence, and occupation?

A. David Tompkins; past sixty-four; Mott Haven; working in a foundry, J. L. Mott's foundry.

Q. 2. How long have you worked in that foundry?

A. I commenced there in 1841, when Mr. Mott began his works there. I have only been away about three months.

Q. 3. Have you any knowledge of a set of patterns for a fire-place heater, containing a magazine feed within the cylinder or body thereof, and a top opening in said magazine feed for feeding through the top of the heater, being received at said foundry? If so, when did they arrive?

A. At the best of my knowledge, they came there in 1867, late in the season, nearly in December, I should suppose—December, 1867.

Q. 4. How soon were castings taken from said wood patterns?

A. As soon as possible; they hurried along as soon as they could; I can't tell to a week or so.

Q. 5. What was done with the castings that were taken from said wood patterns?

A. They were put together and carried to Mr. Mott's house; the heater was put up there.

Q. 6. Did you see that heater in use in Mr. Mott's house that winter?

A. I saw it once; I think rather towards spring time.

280 Q. 7. How did it appear to burn, well or ill?

A. The coal seemed to burn very well in it.

Q. 8. How do you fix it as the year 1867 when those wooden patterns arrived at the foundry?

A. Well, on account of old Mr. Mott's dying in the spring of 1866, and I recollect it pretty smartly as being only a year afterwards—little over a year.

Q. 9. Were those wooden patterns altered before the castings were taken from them for Mr. Mott's stove?

A. I don't know of any alterations; I am not in the wood department.

Q. 10. Do you recollect of any iron patterns being taken from those wood patterns, for use in the foundry, in the casting of similar heaters to the one which Mr. Mott so put up and used?

A. Yes, sir.

Q. 11. Do you recognize in this room any of those patterns which were so taken off from the wooden ones and so used?

A. Yes, sir; I recognize these two pieces, Defendants' Exhibit Mott No. 2

Q. 12. Do you know what has become of those wood patterns and the remainder of the iron patterns so taken off from them?

A. I don't know anything about the wood patterns, or where they went; the iron patterns I had orders to break two months ago, at the time an inventory of stock was taken.

Q. 13. Had you stopped casting such heaters; and, if so, why had you stopped casting them?

A. I can't tell why we stopped, but we had stopped a year or more before.

Q. 14. Was any other set of heater patterns received at the foundry from that time (1867) up to 1870?

A. Not as I know of; at present they have a set using.

Cross-examined by complainants' counsel:

X Q. 15. Are you sure that no other set of heater patterns were received at the J. L. Mott Iron Works from 1867 to 1870?

A. Not that ever I saw.

X Q. 16. Can you swear positively that no other set of heater patterns were received at the J. L. Mott Iron Works from the
281 fall of 1867 to the beginning of 1870, except the set you have already mentioned; do you know enough about it to state positively?

A. There has been none but what I have stated; there never came any in my possession; that is all I can say.

X Q. 17. What other heaters were got out at the J. L. Mott Iron Works next after the one spoken of in your direct examination; the wooden patterns of which you say came to the foundry in the latter part of 1867? Give the trade names of the heaters.

A. There was a heater that he is running now called the "Social;" the other one they called the "Defiance," which was the one of which the Defendants' Exhibit Mott No. 2 was the iron pattern.

X Q. 18. Who made the wooden patterns of the "Social?"

A. I don't know.

X Q. 19. Don't you know whether they were made at the J. L. Mott Iron Works or not?

A. No, sir; I don't think they were.

X Q. 20. Who made the wooden patterns for the "Defiance?"

A. I don't know; they came there already made.

X Q. 21. Can you swear positively that it was not after December, 1867, when the wooden patterns for the "Defiance" came to the foundry?

A. To the best of my knowledge, it came there at that time.

X Q. 22. Is your knowledge so definite and do you remember it so accurately at this distance of time that you can swear positively on the subject?

A. Certainly; I could not swear to the minute, day, or anything of that kind. I am swearing to about the month to the best of my knowledge.

X Q. 23. Then you cannot swear positively that the correct date is December, 1867, but you only think so?

A. Yes, sir; to the best of my knowledge.

X Q. 24. Are you sure it was not January, 1868?

A. Quite sure.

X Q. 25. How do you know whether the wood patterns were altered or not as spoken of in your answer to Q. 9?

A. I don't know as they were. I never saw any alteration in them.

282 X Q. 26. Question repeated.

A. I don't know; I don't know of any alteration.

X Q. 27. Question repeated.

A. I don't know whether they were altered or not; I never knew them to be altered.

Redirect:

R. D. Q. 28. Please look at the fire-place heater, Defendants' Exhibit Burrows No. 2, and state how it compares or differs from the fire-place heaters which was put up in Mr. Mott's house, the castings of which were taken from the wood patterns?

A. It looks like the same.

Recross:

R. X Q. 29. Can you swear positively that it is exactly alike, and that it has exactly the same parts composing it as the one cast from the wood patterns of 1867?

A. To the best of my knowledge, it looks just the same as if the same heater had came here out of his house.

R. X Q. 30. Why do you say "to the best of your knowledge" in your last answer?

A. I saw one up there and I see this and they look alike.

R. X Q. 31. Question repeated.

A. Because they look alike.

R. X Q. 32. Question repeated.

Objected to as fully answered.

A. That one looks as if it might have been the one in Mr. Mott's house.

R. X Q. 33. Why do you use the expression "to the best of my knowlededge" in answer to R. X Q. 29, instead of swearing positively on the subject?

A. Those castings were taken all off from one set of patterns.

Answer objected to as irresponsive.

R. X Q. 34. Question repeated.

A. I can't tell whether that they came out of Mr. Mott's house or any other man's house.

283 R. X Q. 35. Can you swear positively and give a direct answer to R. X Q. 29 without qualifying it with the words "to the best of my knowledge?" And if you can, please do so.

A. I cannot so swear.

Redirect:

R. D. Q. 36. Have you any doubt in your mind that that heater, Defendants' Exhibit Burrows No. 2, is not different from the one which was put into Mr. Mott's house in the elements which are shown in the construction of that heater?

A. I have none at all. I can't see anything different.

his
DAVID x TOMPKINS.
mark.

ANDREW BROWN, being produced on behalf of defendants and duly sworn, deposes as follows:

Q. 1. What is your name, age, residence, and occupation?

A. Andrew Brown; 62 years old; Brooklyn, N. Y.; Brown & Patterson's iron foundry; I am Brown, of that firm.

Q. 2. Have you any knowledge of the sale in the city of New York of a fire-place heater containing a fuel magazine within the body thereof and a feed opening in the top of said heater, by means of which opening in the top coal could be introduced into said fuel magazine, which fire-place heater was called the Nott heater; if so, by whom was it sold in the city and between what years?

A. Yes; it was sold by H. Nott & Company previous to the year 1835, and after that down to about 1842 or 1843.

Q. 3. Were you employed in that firm of H. Nott & Co.; if so, during what years and in what capacity?

A. I was employed as salesman and delivery clerk from 1835 to 1862. H. Nott & Co. changed in the year 1837, and then it became Stratton & Seymour, till 1841, and after that Shepherd & Company.

Q. 4. Did the magazine feed in that Nott fire-place heater
284 have an opening through the top of the heater and sufficiently in front of the mantel or fire-place in which the heater was placed to introduce coal through such opening and down into such magazine feed?

A. Yes; it did.

Q. 5. Can you produce a model of the same in tin; if so, will you please do so?

A. I can and do.

Defendants' counsel puts said model in evidence as "Defendants' Exhibit Brown."

Q. 6. Have you seen heaters like "Defendants' Exhibit Brown" only in cast metal in use between the years 1835 and 1843, and did they heat apartments above the rooms in which they were placed?

A. Yes; I have seen them, and they did heat rooms above where they were placed.

Q. 7. Did it not operate on the base-burning principle, and with the magazine filled with coal?

A. It did.

Q. 8. How many sizes of this Nott fire-place heater were made and sold in the city of New York between the years 1835 and 1843? There were three sizes sold.

Q. 9. Is this tin model, Defendants' Exhibit Brown, a correct representation of the construction of those Nott's fire-place heaters made and sold, as you have testified, in the city of New York in the years 1835 and 1843?

A. It is, with the exception that on the back there were cast-iron pipes that the smoke went through for ventilation, and the top was flat instead of on a level.

Q. 10. How much did this heater project in front of the mantel

or fire-place? Give the measurement on the top of the heater where the magazine feed-door is placed.

A. Somewhere about seven inches in front of the frame.

Adjourned till Thursday, February 7th, 1878, at 11 o'clock a. m.

THURSDAY, *February 7th*, 1878.

Met pursuant to adjournment.

(Complainants' counsel seasonably objected to examination of this witness so far as it tends to show any prior knowledge of the invention covered by the plaintiffs' patent, because the witness
285 is not properly named in the answer, and also to questions 2, 4, 6, 7, & 9 as leading.)

Defendants' counsel states that he produces the witness to prove that Charles J. Shepherd had prior knowledge of the alleged invention of Thatcher, at the city of New York, the said Charles J. Shepherd having been one of the firm of Shepherd & Company referred to by the witness in his answer to D. Q. 3, the said Charles J. Shepherd being deceased; that defendants' counsel will formally prove the death of said Shepherd if requested to do so by complainants' counsel.

Q. 11. Was Charles J. Shepherd one of the firm of Shepherd & Co. referred to by you in your answer to Q. 3, and is said Shepherd living or dead at the present time?

A. He was one of that firm. He died at his residence in Brooklyn, N. Y., a year ago last May.

Q. 12. Had Charles J. Shepard, as such member of the firm of Shepard & Company, knowledge of the selling and use in the city of New York of the heaters referred to by you in your answer to Q. 6.

(Objected to as leading.)

A. I say yes, because he was in the place since 1835, the same as I was, and was in the store all that time, with the exception of about two years.

Witness cross-examined by complainants' counsel:

X Q. 13. Who made the model "Defendants' Exhibit Brown?"

A. The man's name I don't know.

X Q. 14. Did you have anything to do with directing its being made?

A. I gave him a rough sketch of the outline of the front part of it and the interior flue, and told him if he went to 242 Water street he might see some of the old ones there.

X Q. 15. Did you go to 242 Water street, and did you find some of the old ones there?

A. I went to 242 Water street, N. Y., and went upstairs on the first floor and went about half way back in the loft and did not see any of the old-fashioned grates, such as the "Defendants' Exhibit Brown."

286 X Q. 16. Did you make any further efforts or inquires on the subject of these old stoves at 242 Water street?

A. I did not, farther than inquiring if I could go upstairs to examine. The person in charge said he could not allow us to go up.

X Q. 17. Did you tell him your object and business?

A. I did.

X Q. 18. What did he say, and what did you say?

A. He said he had imperative orders from Miss Shepard, the executor, not to allow any person upstairs at all. I said that was enough.

X Q. 19. Then you did not tell him what your business was?

A. I did when I went up on the first floor; it was to see an old Nott's grate or heater; that's all I told him. The man that I suppose made the tin model was with me.

X Q. 20. Did he say whether or not any of those old things were in existence?

A. He only said I could not go up.

X Q. 21. Where does Miss Shepard reside, and what is her name?

A. She resides in Atlantic avenue, Brooklyn, No. 122, I think; her name, I think, is Maria; I could not be positive.

X Q. 22. Did you ask her to let you see this old Nott's grate, or look for it?

A. I did not; I had no conversation with her at all, if I had I should think that she would have allowed me to go up; but I have not seen her in a month.

X Q. 23. When did you last see her and had the interview; any relation to this suit?

A. I collected a bill from her two or three weeks ago; the interview had no relation to this suit whatever.

X Q. 24. When did you last see and examine one of these Nott heaters?

A. That is very hard to tell; I could not state the month or the year at all; that is to, swear to.

X Q. 25. Can you swear that you have examined one of these Nott heaters since 1847?

A. Yes; I can so swear.

X Q. 26. Can you swear that you have examined one of
287 these Nott heaters since 1850?

A. I could not swear to it; I may have, as I told you I left there in the year 1862.

X Q. 27. Do you mean to tell the court that you undertook to have a model made under your directions, and to swear to it in this suit, as representing the Nott heater, of which you have spoken, when you are not sure that you have examined a Nott heater since 1850, and when you thought that by simply asking Miss Shepard you and the person who was to assist in making the model could obtain access to an old genuine Nott heater, which you believed to be at 242 Water street, New York?

A. You put down then what I did not say, that this man would go upstairs with me; I never said that; I said that myself would go up; and in regard to that model I can swear to that, because I have

handled them since the year 1832, in Scotland, in Edinburgh, and in New York, too; as far back as that I mean to say.

X Q. 28. You have already said, have you not, that this tin model is not correct in respect to the shape of the top; how came that mistake to be made?

A. That I don't know.

X Q. 29. Will you produce the drawings which you gave the man from which he made the tin model?

A. I could not; I did not make regular drawings, just a rough outline.

X Q. 30. Where is that rough outline?

A. I don't know.

X Q. 31. Where is the man that made the tin model?

A. I don't know.

X Q. 32. Who introduced him to you, and where?

A. Mr. Graff, at his store in Water street.

X Q. 33. What did you each say at that interview?

A. Mr. Graff said that he wanted me, if I could, [to] give him any information about the old Nott heater grate; I said that we could go across to Shepard's and see some of them, but we did not see any; we were not allowed to go upsairs; that was all that passed between Mr. Graff and I, and there was the man that I supposed was to make the tin model.

288 X Q. 34. Did he have anything to say?

A. He looked in and examined a Nott stove, because I told him the principle was all the same in regard to the burning of the fuel; the construction was all the same between the two.

X Q. 35. Where did he look in and examine a Nott stove?

A. At 242 Water street.

X Q. 36. How do you know he did that?

A. I was present.

X Q. 37. I thought you said they would not let you see the old Nott stove; do you mean to modify that?

A. I meant grate—I said grate. I did not say stove; you can see the stoves anywhere.

X Q. 38. Then by Nott stove, in your X. 35 answer, you refer to the Nott stove as made at present?

A. As it has been always made.

X Q. 39. Question repeated.

A. The Nott stoves are made the same to-day as they were made twenty-five years ago—that is, the principles.

X Q. 40. What was the trade name of the heating apparatus referred to in your direct examination, and of which you say three sizes were constructed?

A. It was "Nott's grate." That was the common name at that time.

X Q. 41. Will you swear that it had no other trade name?

A. I won't swear to that.

X Q. 42. Don't you know that it had another trade name besides "Nott's grate?"

A. It may have been termed sometimes a heater and sometimes an open stove grate.

X Q. 43. Will you swear that it had no other designation besides those you have mentioned?

A. Not that I can remember.

X Q. 44. During what period were you in the employ of Shepherd & Co.?

A. From 1841 to 1862.

X Q. 45. Did not Shepherd & Co., while you were in their employ, have a set of wood-cuts which they published and distributed representing their various goods?

A. Yes.

289 X Q. 46. When did you last see one of those papers?

A. The day before yesterday.

X Q. 47. Were not the trade names of the various goods represented on that paper printed thereon?

A. I don't know; I did not read the names of the stoves; I saw it in Mr. Burtis' hands in this office.

X Q. 48. Was any particular wood-cut called to your attention by Mr. Burtis, or any one?

A. Yes; one. I was asked what was that; I said that's a Nott's heater or grate.

X Q. 49. Then while you were in the employ of Shepherd & Co. this particular kind of heater referred to in your last answer was known by no other name than those you have mentioned?

A. Not to my knowledge.

X Q. 50. The thing represented on that wood-cut was the same as the thing spoken of in your direct examination, of which you say there were constructed and sold of three sizes, was it not?

A. Yes, it was the same.

X Q. 51. If this thing had been known by any other name than those you have stated your memory would have enabled you to recollect the fact, would it not?

A. In taxing my memory I am impressed that they were sometimes called "Saracenic grate."

X Q. 52. How many of these "Saracenic grates" were ever sold by you, or to your direct personal knowledge?

A. To the best of my recollection there might have been from one to a hundred; I could not recollect, it was so long ago.

X Q. 53. How many of these "Saracenic grates" did you ever see in actual use with the fire burning in them?

A. I should think about eight or nine, or thereabouts; more or less.

X Q. 54. Where did you see them in use, and by whom?

A. I saw them at Dr. Milnor's house, in Beekman street. He was the pastor of St. George's church. Mr. Robert Stratton's house, in Rose street; one up in 14th street, a man by the name of Smith; one in Sands street, in Brooklyn, an old sea captain had. There might have been others, but I don't recollect them.

290 X Q. 55. What was your special business with Shepherd & Co., down to 1846?

A. I was delivery clerk and doing errands.

X Q. 56. How came you to examine the stove in Dr. Milnor's house, called the "Saracenic" grate, while a fire was burning in it?

A. There would be word sent around that the stove wanted some repairs, isinglass or front grates, and I would go around and put them in sometimes. It was just around the corner from the store.

X Q. 57. Was it part of your business to do repairs?

A. When it was needful.

X Q. 58. How many times did you repair Dr. Milnor's "Saracenic" grate, or examine it, while a fire was burning in it?

A. I could not recollect. It could not be repaired while the fire was burning in it, except putting in isinglass.

X Q. 59. Did you help put it up?

A. No, sir.

X Q. 60. How many times did you see it after it was up; will you swear you saw it once with or without a fire in it?

A. This heater was put up before Shepherd's time.

X Q. 61. Is the same true of all the other heaters spoken of in answer to X Q. 55?

A. I could not say in regard to that.

X Q. 62. Name one of such heaters, stating when, where, and by whom you saw it in use, that was either made, used, or sold by Charles J. Shepherd or his firm.

A. I could not state the place, or when, or the person.

X Q. 63. Can you swear that any of these "Saracenic grates" were sold by Charles J. Shepherd or his firm?

A. I could not swear either for or against it, as the time is so long ago.

X Q. 64. Can you swear that you or any other employee of Charles J. Shepard or his firm sold any of these Saracenic grates while you were in the employ of Shepard's said firm?

A. I would not swear to it, but I think they did.

X Q. 65. You have spoken of certain heaters in Edinburgh, Scotland; state by whom they were made.

A. I don't know who made them.

291 X Q. 66. State how you came to have anything to do with those heaters in Edinburgh, Scotland.

A. I was employed in the store where they were for sale when I was a young lad; I presume they came from London. A son of the Notts, in Water street, had a place of business in London; they made the stoves there and they cast them there, and I have seen the same stoves in Water street that were in England in 1831 or 1832.

X Q. 67. What year did you come to this country?

A. In 1835.

X Q. 68. Look upon the piece now shown of "Defendants' Exhibit Brown," and state exactly of what material [it] was made, and the dimensions of the corresponding piece of the Saracenic heaters that you had to do with in Edinburgh, Scotland.

A. It was made of cast-iron. It was made of three pieces, the same as it was made in this country; each side piece was about six

inches wide throughout. It was all straight and did not have the gaps shown in the exhibit, and it was all full of small holes in the whole front to let the heat out into the room, both top and side pieces. The top piece was from about two foot four inches to two foot eight in width from side to side.

The top piece was laid over the upper ends of the upright side pieces just enough for a key to catch to hold them together. The depth of the top piece in the center was about six inches, and about three to four and a half inches on the sides, where it joined the side pieces.

The part of the exhibit referred to by the witness is marked "A" by the examiner. Each side piece is marked B.

The points where the jags are are marked J.

X Q. 69. Why did you have made these jags indicated at J J, when you undertook to represent these Saracenic grates by a tin model?

292 A. I had nothing to do with making the tin model at all; I did not give full drawings; I did not mention or direct in regard to the part of Defendant's Exhibit Brown at all; that has been taken from that cut, I should think. Will you allow me to show how these jags came to be made so that the frame could come down on the side of the tin model?

Last sentence of above answer objected to by complainants' counsel as irresponsive.

X Q. 70. Why did you swear that that tin model was a correct representation of these Saracenic grates without saying anything about the jags J J?

A. I did not swear that that was a perfect model. I said that the outlines as to the general appearance in the front resembled Nott's heater. There is half a dozen things there that was not in Nott's heater at all; there are cast-iron pipes on the back of Nott's heater for radiation that are not in the model.

X Q. 71. Was it not a well-known fact that this Saracenic grate was an article covered by a patent?

A. It was generally known by a great many men that there were two or three patents on it; that's what I have heard around the store.

X Q. 72. Will you produce "that cut" spoken of in your answer to X Q. 69?

A. I have not got it.

X Q. 73. Who has got it?

A. I don't know.

X Q. 74. Who last had it to your knowledge and at what time?

A. The last time I saw that cut was the day before yesterday in this office; I don't know who last had it; Mr. Burtis had it last to my knowledge, as he showed it to me.

Counsel for complainants calls upon the defendants, and particularly upon Mr. Burtis, to produce the wood-cut referred to by the

witness, and counsel for complainants gives notice that he desires to cross-examine this witness concerning that paper.

Defendants' counsel states that he intended putting it in on the redirect as evidence for the defendants, and that it is time
293 enough when it is put in evidence for complainants' counsel to seek a cross-examination thereon.

X Q. 75. Mr. Burtis has been present at this examination for the last half hour, has he not?

A. I should think he has.

Met pursuant to adjournment.

MONDAY, *February* 18*th*, 1878.

Cross-examination of the witness, ANDREW BROWN, continued:

X Q. 76. Will you describe the exact construction of any of the heaters like Defendant's Exhibit Brown that you saw in Edinburgh, Scotland, in use for the purpose of heating a room or rooms above the one in which the heater stood, explaining in detail how the heat was carried to the apartment or apartments above, if at all?

A. The heat was carried up in tin pipes, to the best of my recollection. It is a very hard matter to describe that heater, as I have not got a model here to show it. The bottom plate is made of cast-iron and the side is cast-iron; also the front. These are carried out about one foot ten inches high or thereabouts, lined with fire-brick on the ends and back, with a division of fire-brick about two-thirds of the size in width of the chamber of combustion running down to about four inches above the grate, so as to allow a magazine for coal, with an opening behind this flue-brick for the draft. On the top of the first section was a second section carried in on the front and the ends, smaller than the first section, running up about six inches high, that forming a continuation of the magazine below upwards, with a cover on the top to feed it from, to put the coal in, and a damper to let off the gases and make direct draft; then on the back was a cast-iron dish-plate; the draft went into that and down onto the bottom base, from thence up through cast-iron flues to the upper chamber, where the smoke-pipe sets on. In front of the stove were grates and isinglass showing the fire, with cast-iron facings or frame made in three parts fitting onto the body of the grate, meant to fill up the openings between the outside of the grate
294 and the inside of the fire-place. In this facing, or frame, small holes were perforated to let the heat out into the room where it stood. That is about the description as near as I can recollect. The bottom is a rotary grate revolving on an axis. The width of the body or first story is about twenty inches and the depth about ten or twelve inches.

X Q. 77. Is not the tin model, "Defendants' Exhibit Brown," in this room, and has it not been here ever since you came here to-day?

A. I can't say in regard to all that time as I have not been here all day. The outlines of the front of that model, "Defendants' Exhibit Brown," is like the regular grate.

Objected to as irresponsive.

X Q. 78. Question repeated.

A. Yes; it is in this room; it was, to my knowledge; I saw it when I came in this morning standing there; I have been out twice.

X Q. 79. You say in your answer to X Q. 76 that "the draft went through cast-iron flues to the upper chamber where the smoke-pipe sets on;" do you mean the draft carrying the products of combustion into the smoke-pipe?

A. I mean and say that the smoke and heat went up these cast-[iron] flues, except when the damper was opened, that being more direct to the smoke-pipe than up through the cast-iron flues. The damper, when shut, the flame and heat and smoke had to go up these cast-iron flues into the top chamber where the smoke-pipe sets on.

X Q. 80. Where did the smoke-pipe set on?

A. The smoke-pipe set on the cast-iron plate on the top of the grate, towards the back part of the top.

X Q. 81. You have not explained how this apparatus which you say you saw in use in Edinburgh heated the room above that in which it was set.

A. I have never said that I saw it in operation in Edinburgh, to my recollection of my testimony given.

X Q. 82. You have not explained how this apparatus, which you say you saw in Edinburgh, was arranged to heat rooms above that in which it was placed?

295 A. I never said that I saw it in Edinburgh put up or arranged in that way; I have seen the grate in Edinburgh; because we never sold any there.

X Q. 83. What did you have them there for if not for sale?

A. For sale.

X Q. 84. How many did you have?

A. We had one—a sample one.

X Q. 85. Then, that is what you mean when you say, in answer to X Q. 27, when you say, speaking of these heaters, "I have handled them since the year 1832, in Scotland, in Edinburgh, and in New York, too, as far back as that;" you mean, then, only that you had a sample in Edinburgh; that you never knew — to be sold or set up?

A. Yes.

X Q. 86. Why was this "Saracenic grate," as you call it, not sold after 1845, as you have stated?

A. People's tastes and minds alter. It was the same way with the Nott stove after 1845; furnaces—hot-air furnaces—came in and took their place.

X Q. 87. Will you swear positively that Charles J. Shepard ever had knowledge of the use of any one of these Saracenic grates for the purpose of heating a room or rooms above the one in which it was placed, it being placed within the mantel of a fire-place of the ordinary construction; and, if so, state where Charles J. Shepard

saw the same in use and exactly describe the mode of carrying the heat to the upper room or rooms, and state who had it in use.

A. I won't swear to Charles J. Shepard's seeing that; he may and may not. The firm at that time was Stratton and Seymour, and C. J. Shepard was a clerk the same as I was; the firm might have been H. Nott & Co.; I mean H. Nott & Co., and then Stratton & Seymour.

X Q. 88. How long was Charles J. Shepard connected with any of the firms mentioned in your last answer, and during what period, and in what capacity?

A. He was with H. Nott & Co. in the fall of 1835 to the year 1857, I think it was, when they failed. Stratton & Seymour succeeded H. Nott & Co., and Mr. C. J. Shepard came back to them in the year 1838 or '39, and was with them till the year 1841, employed as a clerk, when, in the year 1841, he bought out Stratton & Seymour. He was salesman, kept some of the books, and collected bills.

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X Q. 89. What was your business during the same period? State particularly.

A. I was receiving clerk for goods coming in and for delivering the same, and charging them on the blotter, and keeping men's time, opening and shutting the store and sweeping out.

Redirect examination:

R. D. Q. 90. Were you with the firm of Stratton & Seymour while Charles J. Shepard was a clerk, namely, from the year 1838 to 1841; also were you employed by said Shepard after he bought out said Stratton & Seymour; and, if so, for what length of time?

A. To the first part of the question I answer yes; I was employed by said Shepard after he bought out Stratton & Seymour till May 10th, 1862.

R. D. Q. 91. Have you any doubt of Charles J. Shepard's having, during these periods of time referred to in the last question, knowledge of the use of these fire-place heaters called Saracenic grates, for the purpose of heating a room or rooms above the one in which such fire-place heater was placed?

Objected to as leading and incompetent.

A. I have no doubt; he must have known about these heaters, I should think, because he was there in the year 1835, the same year I went there, and was there the whole of the time, with the exception of about fifteen months, after the failure of H. Nott & Co.

Objected to as irresponsive.

R. D. Q. 92. Was it any part of his duties to sell such fire-place heaters during said periods of time?

Objected to as leading.

A. Yes; he acted as salesman.

R. D. Q. 93. Please look at the circular now shown you, and state if you recognize it.

A. I do.

297 R. D. Q. 94. What is the fire-place heater as sold by said Shepard, as shown on that circular, and state when said circular was used by Shepard.

Objected to as assuming what was not proved and as leading.

A. It is the one around here, Saracenic parlor grate for dining-rooms, &c. That was what it was called then. This sheet must have been printed in 1841, or after, but some of these were in existence long before that under H. Nott & Co.

R. D. Q. 95. You have stated in your cross-examination that features were contained in that Nott fire-place heater which are not shown in the model "Defendants' Exhibit Brown." Can you refer to and produce a model which shows all the features of that Nott fire-place heater, including the way in which the mantel frame of the fire-place heater was constructed? If so, please do so.

Objected to as leading.

A. I can and do.

Model produced by witness put in evidence as "Defendants' Exhibit Brown No. 2." Circular referred to by witness put in evidence as "Defendants' Exhibit No. 3."

Recross-examination:

R. X Q. 96. Who made "Defendants' Exhibit Brown No. 2?"

A. There was a man came to our office, I don't know his name, a tin man, to see if I could more fully explain than I had hitherto done in making the first model, as he wanted to make another. I did so, to the best of my recollection, of all the parts, especially those about the chamber of combustion, with the back flues, lower and top chambers of flues, and the facings or frame made in three parts.

R. X Q. 97. Do you mean to swear that the facing of this model ought not to have been perforated with a number of holes to let the heat out into the room, as you have stated?

A. I don't swear to that. I told him to make holes in the side pieces.

298 R. X Q. 98. Then there ought to have been holes perforated in the side pieces to represent the holes which you have stated were designed to let the heat out into the room, ought there not?

A. There ought to have.

R. X Q. 99. Ought not the upper cross-piece, which I now mark "A," to have been perforated with holes to represent the holes which you have stated were designed to let the heat out into the room?

A. To the best of my recollection, and I am almost positive that there were no holes or perforations in that upper centre piece in the original.

R. X Q. 100. How came you to swear that this model, "Exhibit Brown No. 2," shows all the features of that Nott fire-place heater,

including the way in which the mantel frame of the fire-place heater was constructed, and are you any more sure of the correctness of the other parts of the model than you were of the correctness of the two pieces which you say now ought to have been perforated?

A. I never swore that these models were perfect in all the formations of the plates, in regard to the ornamentation, with the exception on the sides; I know the sides were open work; there were holes in them.

R. X Q. 101. Question repeated.

A. I said before that they should have been perforated at the first examination; that these sides were open; I am sure about these back flues that they are as in that model there, except that in place of being round they were square.

R. X Q. 102. Why did you have these made round?

A. I told the man that there were flues running up; I did not say square or round to him. I presume, as all of these pipes are made round in these days, the tin man took it for granted that they were the same.

R. X Q. 103. Was there a hinged lid on the top of those Saracenic grates?

A. The top cover was not hinged.

R. X Q. 104. Why then did you make a hinged cover or lid?

A. I told him the cover opened on the top; that is all the instructions I gave him about that, and the same judgment, I suppose, in regard to hinging; was same as the flues, because the covers are made to hinge in these days; I mean at the present.

299 R. X Q. 105. Is the model, Defendants' Exhibit Brown No. 2, intended to represent each of the sizes of the Saracenic grate, of which you have spoken?

A. In the construction; there were three different sizes.

R. X Q. 106. Were these three sizes in the same proportion?

A. Yes, they were; one towards another.

R. X Q. 107. Give the height of the largest size?

A. They were all about the same height—about two feet six inches to two feet eight inches, as near as I can be correct.

R. X Q. 108. How broad was the longest size?

A. I should think about three feet.

R. X Q. 109. How broad was the second size?

A. Somewhere about two foot eight or six.

R. X Q. 110. How broad was the third size?

A. Somewhere about two foot two, or two foot three.

R. X Q. 111. How deep from the front, just below the mica windows and thence to the rear of the whole apparatus, was it in the largest size?

A. Somewhere about two foot six to two foot four, I should think.

R. X Q. 112. Same question in regard to second size.

A. About two foot one to two foot two.

R. X Q. 113. Now, the third size?

A. Somewhere about two foot to one foot ten. They did not vary much in the depth; they varied more in the length.

R. X Q. 114. Is this model, "Defendants' Exhibit Brown No. 2," constructed correctly to a scale?

A. I gave the man no scale, and I don't know if it is or not.

Adjourned to Thursday, February 21st, 1878, at 11 o'clock a. m.

THURSDAY, *February 21st*, 1878.

Met pursuant to adjournment.

Adjourned to Monday, February 25th, 1878, at 11 o'clock.

MONDAY, *February 25th*, 1878.

Met pursuant to adjournment.

R. X Q. 115. Are you able to swear whether or not "Defendants' Exhibit Brown No. 2" is substantially of correct proportions to represent what you have spoken of as Nott's Saracenic parlor grate?

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A. I should think it was, to the best of my recollection.

Answer objected to as irresponsive.

R. X Q. 116. Question repeated.

A. I won't swear to that, because I don't know. I never measured the model. I could not swear that it is of correct proportions.

R. X Q. 117. Will you swear positively that the back of that heater, "Defendants' Exhibit Brown No. 2," by which I mean the part where the three upright flues are seen, including the broad flue that goes downward to the base, with which the three upright round pipes are here connected, correctly represents the corresponding parts of Nott's Saracenic parlor grate?

A. I can swear that there was a back broad flue there and upright pipes.

Answer objected to as irresponsive.

R. X Q. 118. Question repeated.

A. The other answer which I gave is the best I can give from my recollection; if I had seen a grate yesterday or to-day I could give it more definite or more explicit, I suppose.

R. X Q. 119. State whether you can or cannot swear positively, at this distince of time, as inquired of in R. X Q. 117.

A. To the best of my recollection, it does.

Answer objected to as irresponsive.

R. X Q. 120. Question repeated.

Further repetition of question objected to as it has been fully answered in answers to R. X 117 and 118.

A. My answer is the same as the previous one.

(Answer objected to as irresponsive.)

R. X Q. 121. Question repeated.

Objection continued. Further objected to as asking the witness to draw a conclusion on his testimony. All that can be asked of the witness is his knowledge of the facts, and not to draw a
301 conclusion on a metaphysical proposition. It would be proper to ask the witness whether he can or cannot swear positively as to certain facts, but the question goes beyond this, and to any extent beyond is incompetent.

A. I can swear there was a broad back flue and square armed pipes running up to these chambers.

Objected to as irresponsive.

R. X Q. 122. Question repeated; and the witness is requested to notice that the question calls for a direct answer—yes or no.

A. Yes; to the best of my recollection.

R. X Q. 123. Is your recollection so clear that you can swear positively on the subject?

A. Yes; in regard to that back plate and these flues.

R. X Q. 124. Is that all?

A. And the top and bottom chambers.

R. X Q. 125. Is that all you can swear positively to the correctness of in the particulars inquired of?

A. I think it is.

R. X Q. 126. Can you swear whether or not the base and upper part of the back part of these heaters, shown here as connected by the upright pipes, was square or round?

A. They were of square form.

R. X Q. 127. You are positive on that point?

A. Yes.

R. X Q. 128. Are you just as positive that there were three upright pipes and not two?

A. There were some with two pipes, some with three, and some with four pipes.

R. X Q. 129. What was the size of these square vertical pipes, which are in "Defendants' Exhibit Brown No. 2" represented as round?

A. In the neighborhood of four inches by three inches in cross action, but larger at the bottom.

R. X Q. 130. How much larger at the bottom?

A. They might have been an inch deeper at the bottom, but the same width.

R. X Q. 131. Is the top piece of this model, "Defendants' Exhibit Brown No. 2," a correct representation of the top of "Nott's Saracenic grate?"

A. Not exactly; the cover was not hinged, and the top was made in two parts put together with screws and nuts.

302 R. X Q. 132. Describe exactly how this top was made in two parts and put together with screws and nuts.

A. I can't do it.

R. X Q. 133. Do you mean that the two parts were put to-

gether with screws and nuts or that the two parts were fastened to the body of the grate itself by screws and nuts?

A. I mean the back part was made fast by screws and nuts or bolts and nuts onto that back chamber, and the front part was fastened with screws and nuts to the front chamber, or second-story chamber.

R. X Q. 134. Now, where did the two pieces which you say formed the top of the whole apparatus come in contact with each other? Please rule a line across the top of the top piece of model "Defendants' Exhibit Brown No. 2," showing the line of contact of the two pieces.

A. Somewhere thereabouts; I can't say exactly.

The witness draws a line on Defendants' Exhibit Brown No. 2, marked "line."

R. X Q. 135. Give me the name and residence of any person that ever used a thing like "Defendants' Exhibit Brown No. 2" by placing the same in a fire-place within a mantel and connecting the same with a hot-air flue extending from the hollow of the fire-place to the room or rooms above, stating the place where the apparatus was so set up.

Objected to as having been substantially asked with reference to Defendants' Exhibit Brown No. 1.

A. There was a person by the name of Smith, whose residence was in Fourteenth street, where there was one put up that way. There was a builder in Tenth avenue, whose name I don't recollect now, I think he used them that way. I am very sure he did. I would not swear to being very sure, but I think so. He had two—one in each of two houses; and there may have been others, but I don't recollect.

R. X Q. 136. Which of these are you most sure, Smith's or the builder's, or are you more sure of one than the other?

A. Mr. Smith's.

303 R. X Q. 137. What was his first name?

A. I don't know.

R. X Q. 138. What part of Fourteenth street was it?

A. I think between Eighth avenue and Broadway. I could not be positive.

R. X Q. 139. How far was it from Broadway?

A. I could not say the number of feet. My impressions are, to the best of my recollection, it was nearer the Eighth avenue.

R. X Q. 140. State, as near as you can, how far it was from Broadway, and on which side of the street it was.

A. To the best of my recollection, it was on the north side, but the distance or number of feet I can't say. I never was there, to my knowledge, and I can't give you any nearer answer.

R. X Q. 141. Was the grate set up in the basement or in the parlor, or in what room in Smith's house?

A. I should think it would be in the basement. I don't know positively, but that is where they were usually set.

R. X Q. 142. Then you never were in Smith's house in Fourteenth street?

A. Not to my knowledge.

Redirect:

R. D. Q. 143. You referred, in your answer to R. X Q. 54, to having seen Nott's fire-place heaters at Dr. Milnor's house in Beekman street and Mr. Robert Stratton's house in Rose street, and at the house of an old sea-captain in Sand street, Brooklyn. How did such fire-place heaters compare with or differ from the construction shown in model "Defendants' Exhibit Brown No. 2?"

Objected to as assuming what the witness has not stated, as leading, and as not tending to show any prior knowledge on the part of Charles J. Shepard, the person whose prior knowledge alone this witness is called to prove under the answer; and as incompetent.

A. We called them grates at that time. That's a very fair model of them, only not having all the different parts of the plates
304 at hand, so as to make it perfect in every particular in regard to the outlines. But the principles of burning is correct, as far I can tell.

R. D. Q. 144. Were such heaters which you so saw in use bought at Shepard's place of business?

Objected to as already answered.

A. They were bought of H. Nott and Co.—I am sure of it—to the best of my recollection; they must have been.

R. D. Q. 145. How was Mr. Shepard employed at that time at H. Nott & Co.'s?

Objected to as indefinite as to time, and as assuming what the witness has not stated, and as already answered.

A. He acted as salesman, kept some of the books, and made some collections.

R. D. Q. 146. Do you mean to testify that you saw such heaters in use in the cities of New York and Brooklyn prior to the year 1845?

Objected to as leading and already answered, and as incompetent under the answer.

A. If I have seen the grates burning I do not recollect having been upstairs in the chambers.

R. D. Q. 147. Did Mr. Shepard have this Nott fire-place heater called Saracenic grate for sale in this store at the time when the illustrated circular was printed and issued, Defendants' Exhibit Brown No. 3?

Objected to [as] assuming what the witness has not stated and as leading.

A. He had them for sale in the year 1841. I don't recollect what year that was published. I should say "yes."

R. D. Q. 148. Were such heaters or Saracenic grates, so called, sold and recommended for heating both the rooms in which they stood and the rooms above?

Objected to as irrelevant and leading.

A. To the best of my recollection, they were.

305 R. D. Q. 149. Were these heaters or grates sold by Nott & Co. and by Shepard to parties to be used outside of the cities of New York and Brooklyn?

Objected to as leading and already answered and indefinite.

A. They were sold by H. Nott & Co. and Stratton & Seymour, and may have been by C. J. Shepard, but that I can't recollect, for the reason that Nott's stoves were getting out of date when Shepard & Co. bought that concern out; that is my supposition.

R. D. Q. 150. Who manufactured these Saracenic heaters or grates?

Objected to as incompetent.

A. The most of the castings were made by H. Nott & Co.; they had a foundry up at the Novelty Works, and they might have been made in Albany previous to that, and there were some parts made at different foundries for C. J. Shepard.

R. D. Q. 151. Do you know the names of any parties who got any of these heaters outside of the cities of New York and Brooklyn?

Objected to as incompetent under the answer.

A. There was a man by the name of Miller, in Newark, who had some and there might have been others. We sent some to Philadelphia, I think.

R. D. Q. 152. Were repairs for these Nott fire-place heaters or Saracenic grates, so called, as represented by the model, kept for sale at Shepard's store?

Objected to as leading and irrelevant.

A. Yes.

R. D. Q. 153. Will you examine the model, Defendants' Exhibit Brown No. 2, in detail and state if it correctly represents the Nott fire-place heater or Saracenic grate in relation to the magazine feed, top feed hole, the cylinder or body of the heater within which said magazine feed is inserted, the back of heating pipes, and the final outlet for the smoke or gases?

Objected to as assuming what is not proved and as leading.

306 A. The general appearance and construction of the whole thing, with the exception of the top cover, which was not hinged, the chamber of combustion is as shown here, the pipes on the back being square in place of round, with the top chamber and smoke outlet or pipe and the facings for the front. The side facings were open work. That's about the whole, and it had an ash drawer.

The grate was a rotary grate instead of a half-circle grate, and it had a damper to let the gas off when the cover was open. That's as near as I can recollect it.

R. D. Q. 154. The air which passed through these side facings, was it not heated by the rear portion of the stove and its radiating surfaces at the rear before it passed up to the apartment above—that in which the heater was placed?

Objected to as leading and as assuming what was not proved.

A. I should say it was; and the air got warm from the front of the store, too.

R. D. Q. 155. And was not the apartment in which the heater was placed heated by the Nott fire-place heater or Saracenic grate, so-called?

Objected to as leading.

A. Yes.

R. D. Q. 156. State by reference to "Defendants' Exhibit Brown No. 2" what portion of the heater or grate projected in front of the mantel, and also what part was set back in the fire-place?

A. From the facings towards the front it projected into the room. The part of the heater behind the facings was in the fire-place.

The witness desires to state that it is a number of years since he was engaged in that line of business, and all his testimony is from recollection, but that is given in the belief that he is correct.

ANDREW BROWN.

Subscribed and sworn to before me this twenty-fifth day of February, 1878.

JOHN A. SHIELDS, *Examiner.*

307 BENTLY C. BIBB, being produced on the part of the defendants and duly sworn, deposes as follows:

Q. 1. What is your name, age, residence, and occupation?

A. Bently C. Bibb; about 63 years old; Baltimore, Md.; I am in the stove and furnace business.

Q. 2. How long have you been in the stove and furnace business, and in what localities?

A. Since in 1851, in Baltimore.

Q. 3. How long have you had knowledge of the use, in Baltimore and elsewhere in the United States, of stoves and fire-place heaters?

A. About twenty years.

Q. 4. Are you familiar with stoves which are called fire-place heaters?

A. I am.

Q. 5. When did fire-place heaters first appear in the market, and where were they first introduced in the market in this country, as far as you know?

A. About 1852.

Q. 6. Where were they first introduced?

A. They were supposed to have been first introduced in Baltimore by Mr. John H. B. Latrobe, of that city.

Q. 7. What was the technical term for such fire-place heaters when they were first produced?

A. They were called the Latrobe.

Q. 8. Are they now in use?

A. They have gone out of use many years — superseded by others more modern.

Q. 9. Have you introduced "stoves," so called, and have you obtained patents therefor?

A. I have done both.

Q. 10. State, generally, what has been the character of these improvements so patented by you, and when you obtained such patents, as nearly as your memory serves you?

Objected to as incompetent, the patents being the best evidence.

A. I obtained numerous patents at various times, but cannot at present recall dates.

Q. 11. Have you introduced fire-place heaters, so called, and have you obtained patents therefor?

A. I have done both.

308 Q. 12. What has been the character of your improvements on these fire-place heaters, so called?

A. I don't know that I can exactly describe.

Further answer to the question objected to as incompetent, as the patents will show for themselves.

Q. 13. Give as nearly as you can the character of these improvements in a general way.

Same objection.

A. In these improvements from time to time my attention was given to bringing the stove further out into the room, thereby attempting to make them give more heat on the first floor, where most of them had failed before.

Q. 14. Was the bringing of the stove more out into the room a thing to be desired in practice; did it not have the effect, in other words, of wasting the heat which had previously been collected in the fire-place in and about the stove-cylinder for use in apartments above the room in which the heater was placed?

A. I think it was decidedly desirable in practice to bring the stove more out into the room; I think it did not have that effect.

Q. 15. Within what limits are you willing to testify that it did not have that effect; suppose the heater was brought just outside the mantel or placed a small portion of it within the mantel, would it not then have that effect?

A. It would have the effect of giving very much less heat above and more below.

Q. 16. Now, is not this true in proportion as you move the heater from within the fire-place to a point or points outside of the fire-place?

A. The further you move it from the fire-place into the room the less heat you will get above, and *vice versa*.

Q. 17. When the heater is removed entirely from the fire-place, as shown in the J. M. Thatcher patent, how would it compare in this respect with the heaters which you knew to exist at the date of that patent which were either wholly within the fire-place or but partially removed therefrom?

309 A. This stove, I observe, has nearly all the body of the fire-pot or magazine removed outside of the line of the fire-place, yet, having in combination with it a series of radiating pipes and flues in the fire-place, the latter cause it to be one of the most powerful heaters known to the trade for heating above or below.

Q. 18. Have you known this Thatcher heater to have been introduced to the trade in Baltimore?

A. It was not introduced there extensively, for the reason of its being too expensive and heavy, and being superseded by less expensive heaters.

Q. 19. Have you known it to have been introduced everywhere in the United States?

A. Not extensively beyond New York State.

Q. 20. Where have you known them to have been introduced in New York State and by whom?

A. That I cannot state further than I have heard in coming in contact with the trade.

Defendants' counsel objects to answer to Q. 19 as incompetent.

Q. 21. Whom have you heard say that these heaters have been introduced in New York State and who was stated to have been the party or parties who had introduced them?

A. I cannot remember.

Q. 22. Did you make any other improvements in fire-place heaters?

A. I made various attempts — improvements; I made improvements on the grate, magazine, the screens ornamental to the tops of the stoves; also attempts to improve the magazine so as to feed from the top, by lengthening the magazine towards the top, so as to feed from the top.

Q. 23. Were your said various improvements used by other stove dealers?

A. Very generally.

Q. 24. Did you claim such improvements as being applicable to stoves in general or do you confine yourself to a special form of stove in their use known as fire-place stoves?

Objected to as incompetent and irrelevant.

A. I confine myself to our own stoves of our own construction and not to stoves generally.

310 Q. 25. Do you mean that you confine your improvements to fire-place heaters, and do not claim them in any other kind of stove?

Same objection.

A. I mean that those improvements are confined to stoves of our own make.

Answer objected to; question repeated; same objection as to Q. 25.

A. I mean to say to that question fire-place heaters are more particularly a specialty with us, but our improvements and patents are not exclusively confined to stoves of our own construction. We do sometimes extend them to other stoves outside of the specialty of ours of the fire-place heaters.

Answer objected to.

Q. 27. Question repeated.

Same objection as to Q. 25.

A. I do claim them as applicable to other stoves.

Adjourned to February 8th, 1878, at 10 a. m.

FRIDAY, *February 8th*, 1878.

Met pursuant to adjournment.

Q. Have you knowledge of fire-place heater called "Ætna;" and, if so, what length of time have you known of its having been made and sold in the market of the United States?

A. I have seen the "Ætna" heater. I have heard of it, but I never saw it till it was produced and proved in a recent litigation.

Q. 29. How did that heater compare with the heater which you improved and sold, so far as the distance which it extended into the room when it was inserted into the fire-place for use?

A. I think that the stoves which I make have a larger body or cylinder, and extend a few inches further into the room.

Q. 30. How long have you made and sold in the United States, at Baltimore and elsewhere, such fire-place heaters as you have referred to in your last answer?

A. I cannot recall the date. I think as far back as 1859. I cannot come within a year or so of the time.

311 Q. 31. Did such protruding fire-place heater at first, about 1859, have a magazine feed in it; and, if not, about when did you first introduce a magazine feed which came up to the top casing of the stove, so that the coal could be fed into it from the top of the stove?

A. It had a magazine feed which fed from the front. When I first commenced selling fire-place heaters I was a licensee of S. B. Sexton, who was then making such magazine stoves or heaters that fed from the front, as I was not at that time manufacturing. Some years afterwards I, in connection with my foreman, a skilled mechanic, commenced looking towards the improvements that would overcome certain difficulties we encountered in attempting to heat the room in which the stove set. Then it was we looked to the improvement of bringing the stove further into the room, as Sexton's had previously failed to heat the first floors, as previously stated. I cannot tell about when I first introduced a magazine feed which

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came up to the top of the casing of the stove, so that the coal could be fed into it from the top of the stove. It would be utterly impossible. I can refer you to my patents and my books.

Q. 32. State as near as you can when you commenced to make and sell fire-place heaters containing a magazine feed and feeding from the top.

Objected to as incompetent and already answered, the witness having stated that he does not recollect without refreshing his memory by reference to patents and books.

A. I cannot give a more definite answer, by reason of being suddenly called upon without a moment's warning, and having neither books nor patents accessible to refresh my memory from.

Q. 33. State it upon memory, as near as you can.

Same objection repeated.

A. I can only give the same answer; if asked a thousand times I could not give any more.

Q. 34. Do you recollect of having so made and sold them as long as ten years ago?

312 Same objection.

A. I must decline to answer for reasons above stated.

Q. 35. Do you recollect having so made and sold them as long as three years ago?

A. I have certainly sold them as far back as that.

Q. 36. Then you have some recollection, have you not, about the matter, and, since you have, state about how much farther back than three years you think you sold such fire-place heaters constructed as last inquired of?

Same objection.

A. The last being a very recent date, I can remember pretty clearly having sold as far back as that date.

Q. 37. Now, let me refresh your recollection, Mr. Bibb, as to this matter by first asking you if you did not, in about the years, 1868, 1869, or 1870, apply to a Mr. Burrows and obtain from him an assignment of an application for a patent for such a construction of fire-place heater, and if such was the case why did you want to protect yourself under such an application and assignment if it were that you were not making and selling such a construction of fire-place heater or just about to engage in such making or selling?

Objected to as incompetent, in so far as it involves contracts of any writings.

A. I did make the purchase of an assignment for a fire-place heater involving all of his supposed or alleged invention and a model of the same, but I am again at fault as regards the date. I am prepared to produce a copy of the assignment, which will give precise dates.

Q. 38. Do you know why you did not get a patent on that application?

Objected to as incompetent, as the Patent Office records will show.

A. All the claims I remember were rejected, but I do not remember for what cause.

Q. 39. At the time that you bought this assignment were you making and selling fire-place heaters having a magaz ine extending to the top and with a hole in the top of the heater through which to feed said magazine?

313 A. I don't remember positively, but I think I was experimenting about that time.

Q. 40. What had you to experiment about if you bought the Burrows application?

Objected to as indefinite and assuming what the witness has not stated, the last question and answer relating to the time before and not after such purpose.

A. We were constantly making experiments from time to time on various parts of the stove; that was our usual custom.

Q. 41. Why did you buy the Burrows application?

A. Because we thought it embodied certain novelties that we could introduce into our stove to advantage.

Q. 42. What do you refer to by novelties?

Objected to so far as it calls for the contents of Burrows' application.

A. About that time we had a suit pending with Messrs. Stuart, Peterson & Co. on the subject of ornamental screens or covers as applied to the tops of fire-place heaters, and we therefore purchased Burrows' application as a defense in that suit, as Burrows' stove showed those screens and ornaments.

Q. 43. Was it not because Mr. Burrows claimed a magazine feed extending to the top of the stove or heater and fed from the top of said stove or heater?

Same objection.

A. That did have some weight with me in the purchase.

Q. 44. And did you not have in view the manufacture of such a heater at that time, and did not you soon after commence to make it, if you had not already begun the manufacture of it?

A. I think I had it in view when I made the purchase; I am not positive; but I think it was about that time that I commenced such manufacture.

Q. 45. At the time you purchased that application did not said Burrows claim to antedate Thatcher in the alle ged invention?

Objected to as incompetent and irrelevant.

314 A. I don't remember.

Q. 46. Was not said Thatcher's name mentioned at the time both by yourself and said Burrows in connection with the matter?

A. I do not remember, as the negotiation with Mr. Burrows was mostly carried on by my attorney and by my salesman, Mr. Fenwick, of Mason, Fenwick & Lawrence, of Washington, and Mr. C. Lehman, of Baltimore.

Q. 47. Had you not, before you applied to Mr. Burrows, been threatened by Mr. Thatcher or some one connected with him?

A. I think I had been.

Q. 48. Who informed you about Mr. Burrows?

A. I can't recall to memory at this time.

Q. 49. Why did you drop the prosecution of the Burrows application and interest yourself with Mr. Thatcher?

Objected to as assuming what is not proved.

A. Because there appeared to be no value in Burrows' application for a patent, as it was rejected in all its claims.

Q. 50. Did you not know that the Thatcher application was also rejected in all its claims, and more particularly in the claims in controversy here, because such claims differed only in that the parts recited were in one case embodied in a fire-place stove and in the other in an outstanding stove, such parts accomplishing the same purposes in both stoves?

Objected to so far as it calls for matters contained in records.

A. I have no recollection of it.

Q. 51. Do you not recollect that in this respect both Burrows and Thatcher stood upon the same footing in the Patent Office until, by virtue of a distinction made in the Patent Office in the classification of stoves, Mr. Thatcher got a claim on these elements here in controversy as placed in a fire-place stove, although the same elements were found to be placed in the same way previously in an outstanding stove?

Same objection.

315 A. I know nothing of the fact.

Q. 52. Do you believe that Mr. Thatcher's patent covers this magazine feed and top feeding provision of the stove when the stove is placed in the middle of the room instead of being stuck into the fire-place?

Objected to because no proof has been adduced that Mr. Bibb is a duly qualified judge of the United States circuit court, competent to pass upon the question of law presented by the question, nor is it even shown that he is competent in any way to express an opinion on the subject, and counsel for complainants protests against a repetition of clearly incompetent and irrelevant questions that are apparently designed only to waste time. The witness is also advised that he need not answer the question unless he sees fit.

A. I cannot answer the question.

Q. 53. I now ask you, as one of the owners in this Thatcher patent, that if a party uses this construction of magazine and feeding through the top of the stove or heater in a heater which is used in the middle of the room instead of being placed in the fire-place whether you consider that he infringes?

Same objection.

A. Of course not. The stove, as standing out in the room, is a very different organization from what goes to make up a fire-place heater, when set in the fire-place and constructed to heat the room in which it is placed as well as several rooms above. One cannot answer in place of the other.

Q. 54. But is the magazine feed inserted in the body of the stove with an opening in the top of said stove or heater through which to feed such magazine any different in construction or mode or method of application in the one case than in the other?

A. It would require very material alterations in the stove
316 setting out in the room to make it accomplish the purpose and design of a fire-place heater.

Q. 55. Question repeated.

A. I gave the explanation to that question.

Q. 56. I ask you a very simple question, which you do not seem to answer—that is, whether the construction or application of the magazine feed and the top feed opening in the stove or heater to such magazine feed is materially different in the outstanding stove from what it is in the fire-place heater. Please confine yourself to these elements, and do not refer to the exit flues of the smoke or heat, which are attached to stoves or heaters in various ways.

A Disconnecting the parts from the magazine that go to make up the combination of a fire-place heater, I think the magazine would work about as well in the one stove as the other, if I understand your question.

Q. 57. Is the magazine feed connected substantially differently in the one case from the way it is in the other, namely, is it connected or attached to an outstanding stove in a substantially different way from what it is connected or attached to the fire-place heater?

A. I think there is a difference.

Q. 58. What difference in the connection and attachment—that is, of substance, and not formal?

A. There is usually a different arrangement of flues as applied to a fire-place stove that is not usually found to an outstanding stove, though I believe such alteration or change does not really produce a difference in the working of the stove or heater.

Q. 59. I asked you to leave out of consideration the smoke or heat flues in answering this question. Therefore please answer the last question with this understanding.

A. I think there is no material difference.

Q. 60. Now, I would ask you to state whether you would, as an owner in the Thatcher patent, consider that a man infringed who used a fire-place heater with a magazine feed extending to the top of such heater, and having an opening in the top of such heater

so as to feed said magazine from the top of the heater and in —
317 to feed said magazine from the top of the heater and in front of the mantel, the flues of such heater, however, for the smoke and heat being the same as the smoke and heat flues found in outstanding stoves prior to the date of said Thatcher's patent.

Objected to as calling for a legal opinion, and as incompetent and irrelevant.

A. I profess to be neither an expert nor a mechanic, and invariably turn over such questions, when they arise, to my patent attorney.

Q. 61. Do you refuse to answer the question according to the best of your judgment?

A. Not at all, but would do so with pleasure if I felt competent to answer it.

Q. 62. Give the best answer you can to it.

Objected to as incompetent and irrelevant.

A. I have no other answer to make.

Q. 63. Now, if the defendant should change his smoke or heating flues in his fire-place heater to any form practicable would he not, notwithstandingly, in your judgment, infringe this Thatcher patent, in which you are part owner?

(Same objection.)

A. I can't say.

Q. 64. Why can't you?

A. Because I don't know.

Q. 65. Why don't you know, since you are a party to the suit, and have brought proceedings, as far as you are interested, against the defendants?

Same objection.

A. The suit is brought by Mr. Thatcher, as representing the other owners, who is more competent to answer the question than I am.

Q. 66. Do you not pay some of the expenses of this suit and litigation, and are you not paying them?

A. Yes.

Q. 67. Would not an ordinary globe heating stove set about half way into the fire-place, with the necessary frame around it to make
318 a finish against the mantel, and to close the room against the fire-place and the said stove set with the usual throat piece and heat pipe for conducting heat to the upper apartments of the house be a fire-place heater?

Objected to on the same ground.

A. It would be regarded as a very rough and incomplete imitation as compared with fire-place heaters. As at present constructed it could not be successfully introduced or sold in this or any other market.

Q. 68. Question repeated and a categorical answer requested.

Same objection and as already answered.

A. It would not.

Q. 69. What would it lack to make it a fire-place heater so arranged and located?

A. I take it that it would be lacking in the principal elements of a fire-place stove, such as the base, columns, the radiating pipes, and the casing, as applied to fire-place stoves as now constructed.

Q. 70. What do you mean by the base in your last answer?

Same objection.

A. I mean the bottom or circulating base that supports the globe referred to.

Q. 71. What do you mean by circulating as applied to the word, base?

Same objection.

A. The globe stove referred to, I take it, has a single bottom; it does not admit of any radiation in or through the said base; consequently it would not give anything like the amount of heat that the present constructed base does give.

Q. 72. Then the only difference in this respect would be as to the degree of heat obtained, the stove body, however, supplying heat as would one of your more modern heaters, so styled, when put up in a fire place; is not this so?

Same objection.

A. If I understand correctly, the globe stove referred to is
319 a plain cast-iron body, surface burning stove; if so, it would be a very different affair from the other; it would not answer the purpose as well.

Q. 73. Are you willing to swear positively it would not be a fire-place heater and not answer the purposes as such?

Same objection.

A. It might be considered a fire-place heater of a very modified and inferior character as compared with the present magazine fire-place heaters now so popular to the trade.

Q. 74. Look at the sketch now shown you of such a fire-place heater, one-half of the body of the stove being represented as within the fire-place and the remaining half as within the lower apartment, and state whether you could not get a fair supply of heat from it, both in the lower and upper apartments, and state whether you do not know of such a construction of fire-place heater, so called, having been sold in this market under the term of the "Acorn" stove or heater.

A. I am not familiar with such a stove; I have seen something similar to it; they are more particularly known as fire-board stoves, with one-half of the globe portion and about one-half of its body placed within the room and the other half in the fire-place. I would think, from its peculiar formation, that it would give very little heat

to the upper rooms, there appearing to be no radiation, but simply a direct draft, which would take the products of combustion too rapidly away from the stove, more particularly to the upper apartments.

Q. 75. What is the heating capacity of these cast-iron stoves when set out in the middle of the room; is it not far greater than any of the fire-place heaters, so called, which you make, if set out in the middle of the room; also, is it not regarded by the trade as one of the most powerful heating and heat-radiating stoves ever made?

A. They have large heating capacity and are regarded as suited only to very large open rooms. The air produced from them
320 is of a very high and dry character and entirely unsuited to heating small and close rooms, especially when permitted to get red-hot, as they are supposed to emit, when in that condition, poisonous gases; it is considered very deleterious to health, and as such considered very unhealthy and unsalable. I suppose the heating capacity of these cast-iron stoves, when set out into the middle of the room, would be far greater than that of fire-place heaters, such as I make, when set out into the middle of the room.

Q. 76. Now, is the generation of heat and the radiation of heat in such a stove materially affected on the occasion of its being inserted into a fire-place in the manner stated?

A. As I understand the question I don't think there would be any difference; it is, I think, calculated to give as much heat in the one position as in the other.

Q. 77. Now, if an abundant supply of air is admitted into the fire-place, and rear half of the stove so located, would there not be as much and even a far greater generation of hot air for the upper appartments than would be with the fire-place heater, so called, which you have made and sold for many years past?

A. I think our heaters would heat quite equal to a stove of this construction, because of their greater radiating surface as confined to a fire-place.

Q. 78. If you were to place in the middle of the room one of these Acorn or globe stoves and one of your fire-place heaters of the same size, would not the Acorn or globe stove give out a far greater amount of heat?

A. I think it probably would.

Q. 79. Could not a magazine feed be inserted in the Acorn globe stove so that said magazine could be filled from the top and in front of the mantel, such magazine extending up to the top plate of the stove?

Same objection as to question 73.

A. The magazine could be inserted in the stove, but it could not be successfully used with this construction of stove—I mean this globe.

321 Q. 80. State particularly and in detail why such magazine feed and top feeding hole could not be sucessfully used with this construction of stove.

Same objection.

A. It appears to me that this construction of stove could not be successfully used or made to operate in the absence of an open grated fire-pot in the lower part of the cylinder of this stove above the grate.

Q. 81. Had the Morning Glory stove, which contained a magazine feed filled from a top opening, an open grated fire-pot in the lower part of the cylinder, such as you referred to in the latter part of your answer?

Same objection, and also that a specimen of the stove referred to is the best evidence.

A. It originally had an open grated fire-pot at the lower part of the magazine, which magazine rested on a line with the grate.

Q. 82. Has the defendants' fire-place heater such an open grated fire-pot in the lower part of the cylinder, and if it has not, then how can such an arrangement be essential in the Acorn globe stove or heater any more than in the defendants' heater, with a magazine feed in each?

Same objection.

A. It has not; the stoves are entirely differently constructed.

Q. 83. I do not understand you; you stated in your answer to question 80 that the magazine feed could not be used because of the absence of a grated fire-pot in the lower part of the cylinder; now you have admitted that the Morning Glory stove has not got such an element, nor has the defendants, stove such element. Since such an element is not necessary in any other construction of stove or heater to make the magazine feed operate well, why should it be necessary in this Acorn or globe heater; in other words, are you not mistaken in the answer which you have made to the question 80?

Same objection to the whole question; that portion of the question which assumes that the witness has stated that such an
322 element is not necessary in any other construction of stove or heater to make the magazine feed operate well is also objected to on the ground that the witness has not testified to any such thing.

A. The difference between the stoves is so great that it would require a long explanation, together with models, to illustrate, in order to show intelligently the difference between these fire-place stoves as now made and this Acorn stove. This Acorn stove could not be worked satisfactorily in the absence of a fire-pot. This drawing don't show a fire-pot, and I conclude that it has not got any.

Q. 84. What do you mean in your last answer by a fire-pot?

Same objection.

A. It has not a fire-pot in any way resembling base-burning fire-place heaters. When filled with coal through the top of a magazine

the coal would seem to spread out against the cylinder or body of the stove, which would make it very difficult, I think, to operate a stove of that construction.

Q. 85. This spreading out of the fuel in the bottom of the stove is just what is wanted, is it not, in connection with a hanging magazine feed, and is just what S. B. Sexton, your licensor, claimed to have patented, is it not? I refer you to another sketch which illustrates, does it not, this spreading out of the fuel on an extended grate surface from the magazine feed in the Acorn Globe stove or heater?

Same objection and as leading; and also that, the claims of Mr. Sexton being of record in the Patent Office, the best evidence is the patent.

A. The sketch I have before me is similar in some respects to Mr. Sexton's patent. In Sexton's patent, as I recollect it, the coal spreads out on the grate outwards to the side of the stove and rests against a brick lining, which prevents the burning coal from coming in contact with the outer wall or cylinder of the stove—like this. To the first branch of the question I say it is; I am not
323 prepared to say that it is patented, but it is shown in his, Sexton's, stoves. This sketch appears to me to be similar. This sketch does illustrate the spreading out of the fuel in an Acorn Globe stove heater.

Adjourned to February 9th, 1878, at 12 m.
Met pursuant to adjournment.

Q. 86. Now, in the sketch last shown you, can you see that there would be any substantial difficulty in burning the coal between the feed-mouth of the magazine and the grate, also such of the coal as would spread itself out laterally against the sides of the stove, as represented in said sketch?

Objected to as incompetent and irrelevant.

A. Not having tried it or seen it tried, practically, I am unable to state.

Q. 87. Then, why do you say, in your answer to Q. 79, that the magazine feed could not be successfully used with this construction of stove?

Same objected to as assuming what the witness has not stated.

A. It was simply my opinion, as I am not very familiar with those mechanical devices to the extent of forming a positive opinion.

Q. 88. Then, your statement in answer to direct Q. 83, namely, "This Acorn stove could not be worked satisfactorily in the absence of a fire-pot," was a matter of opinion also, was it not?

Same objection.

A. It was.

Q. 89. In your opinion would a magazine feed inserted into the body of said Acorn stove interfere with the burning of the fuel in such stove, the fuel having been fed into the magazine feed from the top of the stove?

Objected to as incompetent and irrelevant.

A. I don't think it would.

Q. 90. Do you not know as a matter of fact that stove manufacturers have within the past ten or fifteen years very generally converted their surface-burning stoves into magazine feed stoves
324 by simply suspending within the cylinder of the stove from the top a magazine feed with a feed opening through it from the top, and have done this without any material change or alteration in the flues or fire-pot of the stove?

A. I think I have known of such changes.

Q. 91. And have not the cases in which such changes were made operated successfully in practice?

A. I think they have, so far as I am informed.

Answer objected by complainants' counsel as incompetent, as the witness undertakes to state what he has been informed and not what he knows.

Q. 92. A stove, then, like the ordinary Globe stove, with a magazine feed, as described, when properly set in a fire-place with the usual throat-piece and frame, with provision to let cold air in behind the stove, and with a hot-air pipe or flue to conduct the caloric to the upper rooms, would be a magazine fire-place heater, would it not?

Objected to as incompetent, irrelevant, and hypothetical.

A. I can't see that the change would make a magazine stove of it. Any other construction of stove would produce the same effect, so far as doing the functions of a fire-place heater in heating the room in which it is placed and those above.

Q. 93. (Question repeated.)

A. It certainly would be a magazine fire-place heater.

Q. 94. You have had knowledge, have you not, of outstanding stoves of various kinds existing in the market the last fifteen years which had magazines suspended within the cylinder or body from the top, and feeding from the top of such stoves.

A. I have such knowledge.

Q. 95. Now, if you should take any of such stoves and place them half way, more or less, within a fire-place, with a proper means to prevent the heat escaping into the lower rooms from the fire-place, and with proper means allowing the heat to pass up from the rear half of the stove into the upper apartments, it would be a
325 magazine feed fire-place heater fed from the top, would it not?

A. It would be so regarded, I suppose.

Q. 96. Then, the only difference between the ordinary magazine

feed fire-place heater and the outstanding magazine feed stove being that the one is located in the fire-place and the other out in the room somewhere, and away from the fire-place, is it not?

A. I think there are other differences, as the plaintiffs' stove, as well as the defendants', would be found to differ very materially from the other by reason of their construction and adaptedness in that particular, the latter being of different organization and constructed for that particular purpose.

Q. 97. Please confine yourself to the stoves and heaters referred to in the question and answer 95 in giving your answer to question 96. Question 96 repeated.

Objected to as indefinite and misleading.

A. I don't understand it exactly.

Q. 98. Then the only difference between an ordinary magazine feed fire-place heater and an ordinary outstanding magazine feed stove such as you have referred to in your answer to question 95 would be that the first is located in the fire-place and the other located out in the room somewhere; is not this so?

Objected to as incompetent and irrelevant; and complainants' counsel gives notice that while he has every disposition to allow the defendants to make proof of any facts that may be beneficial to them in this cause he will not submit much longer to the waste of time involved in introducing a mass of incompetent and irrelevant matter, but will insist on the enforcement of the order of the court limiting the defendants' time to take their proofs.

A. I have no further answer to give, and beg leave here to state that in consequence of my physical and mental condition I find myself unable to continue this examination; that my mem-
326 ory is very bad. I find it impossible to make myself distinctly understood. I am liable to contradict myself at any moment, and thus place myself in a very painful and unpleasant attitude in this case, and hope, for the reasons above given, I may be excused from giving further testimony in this case, as I cannot stand the mental strain on my shattered, nervous system.

Q. 99. Question repeated.

Counsel for complainants protests against the continued examination of the witness, who, as is well known to the defendants, has but recently recovered from a severe fit of illness, namely, an attack of erysipelas, and the subjecting him to a lengthened examination, not to prove facts within the knowledge of the witness, but with the evident purpose of subjecting him to needless and wanton annoyance by compelling him to give his opinion upon a long mass of frivolous and irrelevant hypotheses, and requests that this gross abuse of the writ of subpœna, which would not be tolerated for a moment in the presence of a court or other magistrate having power in the premises, should cease.

A. I have no further answer to make than I have already made.

Q. 100. Then you refuse to give a direct answer to the question, do you?

A. What am I to do when I have none other to give? I would answer every question cheerfully; I have given as direct an answer to it as I feel capable of giving, and must certainly have no disposition to withhold any answer to a question propounded to me to the best of my ability.

Q. 101. In view of your answer to the Q. 95, what difference do you see between the ordinary magazine feed fire-place heater and the ordinary outstanding magazine feed stove, both fed from the top, except that in the one case the stove is located partly in the fire-place and in the other somewhere out in the room.

327 Objected to as incompetent and as already answered.

A. My mind is so confused that I cannot answer the question intelligently; I am unable to discriminate the one question from the other.

Q. 102. What difference do you see between the ordinary magazine feed fire-place heater and the ordinary outstanding magazine feed stove, both magazines extending up to and fed from the top, except that in the one case the stove is located partly in the fire-place and in the other somewhere out into the room? Confine your answer to classes of stoves and heaters spoken of in answer to question 95.

Objected to as incompetent and as already answered.

A. I am under the impression that I have already answered that question.

Q. 103. I do not see that you have answered it anywhere, so please give us an answer to it.

Same objection.

A. As I understand the question, there is no material difference.

Q. 104. Then look at the stove now shown you and state how long you have been making it.

A. I am unable to tell you, but I can ascertain by referring to my books, which I will cheerfully do.

Defendants' counsel puts in evidence stove shown to witness as "Defendants' Exhibit Bibb Shoo Fly Stove."

Q. 105. How did the stove differ, if at all, from its present construction prior to your inserting in it a magazine feed coming up to the top of the stove, and with a feed hole into such magazine feed at the top of the stove.

A. It differed in having a short magazine with a ring and cover to same, and in being fed from the front part of the stove through a door which opened into the magazine for the supply of coal.

328 Q. 106. Do you mean that the coal was fed in through a front door and into the top of a magazine feed?

A. I do.

Q. 107. Then this fire-place heater, which you sold as early as the year 1859, was just like "Defendants' Exhibit Bibb Shoo Fly Stove," except as modified by the construction referred to in your answer to Q. 105?

Objected to as assuming what the witness has not stated.

A. I don't think there was.

Q. 108. In extending magazine feed up to the top of the stove and feeding in at the top instead of at the front of the stove, did you move the stove any farther out from the mantel frame or push it in any farther back of the line of the mantel frame? In other words, did you in this respect leave the stove just as it was previously?

A. The stove was brought out, but I had previously made a stove that did extend into the room, that did not feed into the top, but fed into the front door, but was afterwards altered into a top feed. It did not extend quite so far into the room as the present "Exhibit Shoo Fly."

Q. 109. What was the name of that other stove or heater?

A. I think it was called the "Gem," that being one of several that we were experimenting on.

Q. 110. Do you mean to say that the "Defendants' Exhibit Bibb Shoo Fly Stove," which I see on its front bears the inscriptions, Diamond Gas Burner, was, in its alteration from a front feed to a top feed, changed any further than to lengthen up the magazine feed and to open a hole in the top of the stove, in order to supply such magazine with coal? In other words, that it was not moved out with respect to the frame which fits around the heater and against the mantel. Please examine this exhibit once more before you answer this question, and see if I am not right in my conclusion.

A. I think before the alteration in the stove was made it projected out about as far as it does now.

Cross-examination of witness by complainants' counsel:

X Q. 111. Look upon the diagram now shown you and state
329 whether it is not a correct representation of a transverse section of the magazine fire-place heaters, of which you have spoken as made by you prior to the time that you introduced the top feed, and does not H on that diagram represent what you have spoken of as the magazine, and does not *h* represent the cover of the magazine, and does not the drawing of reissue No. 4841 represent a modified form of the same construction, and does not Q in that drawing represent what you call the magazine, and R the cover thereof?

The diagram referred to objected to as not being evidence.

A. Yes.

The diagram referred to by the witness is offered in evidence and marked "Complainants' Exhibit Sexton Cross-Section."

Redirect:

R. D. Q. 112. Is not the diagram "Sexton Cross-Section" a representation of Fig. 2 of Sexton's patent, granted April 9, 1859, a copy

of the drawing of which patent I now show, and does not that represent a cross-section of a stove which stands considerably further within the fire-place than the stove which you referred to on the direct examination, called the "Shoo Fly" stove?

A. Yes.

R. D. Q. 113. Was not the "Shoo Fly" stove patented by you April 30th, 1861, as appear by a copy of said patent, and also by a copy of the reissue of said patent now shown you, with the exception that the magazine feed does not extend up to the top of the stove, so as to feed such magazine from the top of the stove?

A. That "Shoo Fly" is the modification of an old Diamond stove made since this stove shown in the patents. The patented stove was about the first I ever made, and known I think as the "Gem." The one outside (the "Shoo Fly") was made some years afterwards.

R. D. Q. 114. You mean by your last answer that the first fire-place stoves or heaters which you made were similar to the fire-place stoves shown in the drawings of your original and reissued patents, Nos. 32, 176, 4941 (reissue), and was called the "Gem?"

A. Yes, sir.

330 R. D. Q. 115. Did the "Gem stove" extend in front of the mantel as much as shown in your said original and reissued patent?

A. I don't think there was any difference.

Defendants' counsel puts in evidence sketches shown to the witness of the Acorn stove or heater as Defendants' Exhibit Bibb Nos. 2 and 3.

R. D. Q. 116. If the Thatcher patent should be held to be valid in this suit would you not expect to get some pecuniary benefit thereof from out of the defendants, and also other stove dealers who have a similar stove or heater?

Objected to as irrelevant and incompetent, in view of the fact that the witness is a party plaintiff on the record, a fact of which he is not probably aware, and counsel for complainant will take care that the witness does not get so large a pecuniary benefit as to affect his credibility.

A. I should.

R. D. Q. 117. Have you not been subpœnaed and received your subpœna fees for attendance at this examination?

A. I did.

BENTLEY C. BIBB.

Adjourned to Monday, February 11th, 1878, at 12 m.

NEW YORK, *February 11th*, 1878—12 o'clock, m.

Present: Counsel as before.

JOSEPH W. BUDD, a witness produced on the part of the defendants, testifies as follows:

Q. 1. What is your name, age, residence, and occupation?

A. Joseph W. Budd; I am 42 years of age; I reside at 570 Hudson street, New York city, and I am a manufacturer of fire-place heaters.

Q. 2. How long have you been a manufacturer of fire-place heaters, and with whom have you been associated in business during that time?

331 A. Eighteen years; since January, 1860, and with Henry L. Budd, my brother, since the year 1864.

Q. 3. Please look at the fire-place heater now shown you and state if you have knowledge when it was first manufactured and sold, and by whom and where.

Examination of this witness objected [to], so far as it tends to show prior knowledge of the thing patented, because he is not named in the answer.

A. It was manufactured at 184 West 14th street, city of New York, by the firm of Thorp and Budd, in 1859.

Heater referred to put in evidence as Defendants' Exhibit No 1, J. A. S., Ex'r.

Q. 4. What Budd do you refer to in your last answer?

A. Henry L.

Q. 5. Was it commenced to be sold by said Thorp and Henry L. Budd as early as the year 1859, and how long did it continue to be sold by them?

A. It was until 1864.

Q. 6. How did these fire-place heaters like Defendant's Exhibit Budd No. 1 work in practice; what satisfaction did they give?

A. A good satisfaction; they worked well.

Q. 7. Why did said Thorp and Henry L. Budd discontinue the manufacture of these heaters in the year 1864?

A. Thorp died in that year, and Henry L. Budd and myself continued on until 1871, and myself continued on from 1871 to the present time.

Q. 8. What name do you give this fire-place heater?

A. Phœnix.

Q. 9. Please look at the fire-place heater now shown you, which is marked Defendants' Exhibit Budd No. 2, and state how long you have had knowledge of its manufacture and sale in the city of New York?

A. Since 1862 or 1863.

Q. 10. By whom were these fire-place heaters like Defendants' Exhibit Budd No. 2 made and sold in the city of New York as early as the year 1862 or 1863?

A. By William H. Jackson & Son, Broadway and 21st or 22d street.

332 Q. 11. How long did such heaters as Defendants' Exhibit Budd No. 2 continue to be made and sold in [the] New York market, to your knowledge?

A. To the present time.

Defendants' counsel puts in evidence fire-place heater marked Defendants' Exhibit Budd No. 2, J. A. S., ex'r.

Q. 12. Did you ever make a fire-place heater with a magazine feed suspended within the body or cylinder thereof, with an opening in the top of the heater, such magazine feed coming up to such opening in the top, so that coal could be fed in to such magazine feed from the top of the heater; if so, when did you so commence to make them and where?

A. I have made such heater in 1872, at 254 West 14th street, New York, and have sold one or two since.

Q. 13. Did you make the same kind of feeder also, but without such magazine feed; if so, from when?

A. From 1872, and sold them since.

Q. 14. How did such styles of heaters inquired of in the last two questions operate in practice?

A. The one with the feed operated badly, or not so well as the one without.

Q. 15. What was the cause of the one with the feed operating badly?

A. Well, my impression is, on account of the feeder filled with unburned coal hanging directly over the fire, the coal becoming heated while in the magazine liberating part of the gas of the coal, which escaped without being consumed, and then the magazine is in the way of keeping a clear and good fire.

Q. 16. Is this true with respect to all fire-place heaters with which you are acquainted in the trade?

Objected to as incompetent.

A. All those having feeders; I think it is.

Q. 17. Is the heating power or capacity of a stove or heater the same with a magazine feed as it is without it?

A. I don't think it is.

Q. 18. Have you knowledge of outstanding stoves, so called, containing a magazine feed within the cylinder thereof running up to the top and having a feed hole to such magazine feed in the

333 top of the stove; if so, what length of time have you known such stoves to have been made and sold in the United States?

A. I can't swear that I have known them more than ten years; I may be mistaken even then.

Q. 19. With such a stove before you as inquired of in the last question, would there be any practical difficulty in introducing into the top of the fire-place heater, Defendants' Exhibit Budd No. 1, a

magazine feed coming up to the top of the heater, and having a feed hole in the top of such heater, so as to feed coal into the magazine from the top of the heater and in front of the mantel and mantel frame?

Objected to as leading.

A. None.

Q. 20. Would the construction be substantially the same or different in the two classes of stoves—that is, the outstanding stove and your fire-place heater, Defendants' Exhibit Budd No. 1, so far as the magazine feed and top feed hole into the same are concerned?

A. I don't know as I correctly understand the question; there would be no difference in the general construction excepting the feed.

Q. 21. I am referring to an outstanding stove with a magazine feed in it, feeding from the top, and also to your heater, Defendants' Exhibit Budd No. 1, having inserted therein such a magazine feed feeding from the top. Would such two classes of stoves differ substantially from each other so far as the magazine feed and top feeding arrangement are concerned?

A. They would not.

Q. 22. Can an ordinary outstanding globe or cylinder stove be set into a fire-place and so arranged as to warm the room in which the fire-place is contained and also the room immediately above it, and when so set would it not perform all the duties and functions of what is known in the market as a fire-place heater?

Objected to as leading and incompetent.

A. It would be, and would perform the same as a fire-place heater, according to its capacity for heating.

334 Q. 23. Then is there any substantial difference between the ordinary fire-place heater and the outstanding stove, except it is the occasion for its use—that is, that one is a stove inserted into a fire-place to a greater or less degree, and the other is a stove standing out in the room somewhere?

Same objection.

A. Not a particle of difference, so far as the construction is concerned, substantially. The difference in construction is only for the place it is going to occupy.

Cross-examined:

X Q. 24. How many fire-place heaters have you made with a magazine of any kind?

A. Three or four.

X Q. 25. How did they resemble or differ from the the two stoves that have been put in evidence as Exhibits Budd No. 1 and No. 2?

A. There is no difference, except in style.

X Q. 26. Did all the three or four have the same hot-air chamber that is shown in Exhibit Budd No. 1?

A. No, sir.

X Q. 27. How many of them had?

A. Not any.

X Q. 28. Did all the three or four heaters spoken of in X Q. 24 have a hot-air chamber like Defendants' Exhibit Budd No. 2?

A. They did not.

X Q. 29. How many of them had?

A. Not any.

X Q. 30. Then, if I understand you aright, you do not consider the difference between heaters like Exhibits Budd Nos. 1 and 2, with a hot-air chamber, as shown, and similar heaters without the chamber, as a substantial difference, but rather as a difference in style; is that your meaning?

A. Nothing else.

X Q. 31. State what kind of coal, if any, you burned in the three or four heaters referred [to] in X Q. 24.

A. Anthracite.

X Q. 32. How many of them did you burn anthracite coal in, and where, and how long?

A. I can't say how long—sufficient to prove it a failure; near Second avenue, One Hundred and Nineteenth street; another at, I think, No. 244 West Fourth street, this city. They were both taken
335 up and replaced by others—the only experiments I have had.

X Q. 33. Were these three or four heaters all alike in construction?

A. The same thing.

X Q. 34. Which did they more nearly resemble—Exhibit Budd No. 1 or Exhibit Budd No. 2?

A. In size, Budd No. 1. There is no other resemblance.

X Q. 35. Then you attribute the failure of these heaters to the presence of a magazine heating from the top?

A. I attribute the failure to the presence of a magazine in the heater.

X Q. 36. How many fire-place heaters without magazines have you constructed and put in operation?

A. Thousands.

X Q. 37. Is your prejudice against magazine feeds in fire-place heaters shared generally by the trade?

A. I know nothing about the trade's prejudices. I am speaking from my own experience merely.

X Q. 38. Then, if I understand you aright, it is your opinion that a magazine feed fire-place heater is a useless and impracticable structure, and that such has been the result of your experience. Is that your meaning?

A. I mean they are not so good as one without. That's my meaning.

X Q. 39. How many other styles of fire-place heaters have you made or sold within the last ten years besides Exhibit Budd No. 1 and Exhibit Budd No. 2?

A. Only one other style.

X Q. 40. What are the names of these three styles?

A. One was the Phœnix and the other the Dome; the third had no name.

X Q. 49. The third style referred to in your last answer comprised only the three or four experimental magazine heaters of which you have spoken; does it not?

Objected to, as it has not been stated to be an experimental heater by the witness, but an actual embodiment of the magazine feed in a heater and that heater put in actual use.

336 A. It comprises all that [are] of my manufacture, but I have seen many other kinds of magazines in use.

All after "but" objected to as irresponsive.

X Q. 42. Did you sell any other style of fire-place heaters within the past ten years other than the three styles of which you have spoken? And, if yea, give the trade names of such other styles.

A. I have; a few; "Baltimore."

X Q. 43. How many of the Phœnix heaters did you see last year, and how many of the Dome?

A. Perhaps a hundred; I have no means of knowing, but guessing?

X Q. 44. A hundred of both or a hundred of each?

A. I said two or three, perhaps, of the Phœnix heaters; it might be twenty, perhaps a hundred, of the Dome heaters, and perhaps two, or three, or five of the Phœnix heaters.

X Q. 45. How many of these Dome and Phœnix heaters did you sell in the year previous?

A. I have no idea.

X Q. 46. State according to your best recollection.

A. I haven't any recollection about it; it may be 50, it may be 150.

X Q. 47. Have you in any year in the past ten years sold more than 150 of these heaters?

A. I have no idea; I should judge I had.

X Q. 48. Has the sale of these Dome and Phœnix heaters increased or diminished during the past ten years?

A. They have diminished.

X Q. 49. Do you mean to say that you haven't changed the construction of the Dome within the past ten years?

A. I have not; it has not been made ten years.

X Q. 50. Have you changed the construction of the Phœnix within the past ten years?

A. No, sir.

X Q. 51. Then Exhibit Budd No. 1 is the Phœnix and Exhibit Budd No. 2 is the Dome; is that correct?

A. Exhibit No. 1 is the Phœnix; Exhibit No. 2 is not the Dome, nor do I manufacture it—the Exhibit No. 2 heater.

337 X Q. 52. Has the Dome a hot-air chamber like the Phœnix?

A. It has not what you call a hot-air chamber, which is a radiator.

X Q. 53. What is the object of the radiators shown in the Phœnix, referred to in your last answer?

A. It is put there for an imaginary purpose.

X Q. 54. Who devised that construction?

A. Henry L. Budd.

X Q. 55. Do you not know or have you not been informed what was his purpose in putting it there?

A. I have; it was to give more heat to the burning of the fuel—that was his object.

X Q. 56. Describe the construction of the Dome.

A. It has a base 6 inches high, a grate 15 inches in diameter, a fire-pot 16 inches in diameter, 8 inches in height; a cast-iron dome over the fire-pot, which forms the top of the inner structure; 2 radiators of sheet-iron 8 inches in diameter.

X Q. 57. How does it resemble or differ from the Phoenix—Defendants' Exhibit Budd No. 1? State the particulars.

A. It differs in being made, the body, part of cast-iron; otherwise it is upon the same principle and supposed to be more ornamental.

Redirect:

R. D. Q. 58. Why has the sale of the Dome and Phœnix heaters diminished during the past ten years?

A. In my opinion on account of the general depression in business and greater competition.

R. D. Q. 59. Did this magazine in your heater operate, in your judgment, any more disadvantageously to the heating power of the heater than the magazine in any other dealer's heater?

A. I don't think it did.

R. D. Q. 60. In the magazine fire-place heater you made did not the magazine occupy substantially the same space which this hot-air chamber occupies in the Phœnix, Defendants' Exhibit Budd No. 1?

Objected to as slightly leading.

A. If what you call a hot-air chamber I call a radiator, it does.

338 R. D. Q. 61. Did not the heaters with a magazine feed contain the same or similar fire-pot, grate, combustion chamber, and flue which this Phœnix, Exhibit Budd No. 1, contains, and did not differ therefrom, only in style of finish and case and ornamentation, and having a magazine therein suspended within said combustion chamber extending up to the top?

Objected to as leading.

A. It was similar as you state, with the exception that the fire chamber was made lower and larger in diameter.

JOSEPH W. BUDD.

Sworn to before me this 12th February, 1878.

JOHN A. SHIELDS, *Examiner.*

DAVID STUART, a witness produced on the part of the defendants, being duly sworn, deposes and says:

Q. 1. What is your name, age, residence, and occupation?

A. David Stuart; I am 68 years of age; I reside at Philadelphia, and I am an iron founder and manufacturer of stoves, hollow ware, and hardware.

Q. 2. How long have you been making and selling stoves?

A. In Danville, Pennsylvania, previous to Philadelphia, 13 years and in Philadelphia since 1844.

Q. 3. With whom have you been in business in Philadelphia since 1844?

A. With Mr. Peterson; the firm is known as Stuart, Peterson & Co.; we had another partner in the firm for about ten years from 1844.

Q. 4. Who was that other partner?

A. His name was William P. Cresson.

Q. 5. Who was Lewis Bridge?

A. Lewis Bridge is the foreman of our tin-shop.

Q. 6. When did he go into the employment of your firm?

A. I think in 1867.

Q. 7. Where did he work previously?

A. In Little York, Pennsylvania.

339 Q. 8. What time in 1867 did he go into the employment of your said firm?

A. I do not remember.

Q. 9. How did he come to go into the employment of your firm—that is, in what way did he come to the knowledge of your firm?

A. He came to our establishment with 2 patented stoves that he wished to sell to us.

Q. 10. How did this lead to the firm taking him into their employment?

Objected to as irrelevant.

A. We purchased the two patent stoves from him and, finding he was a very ingenious man, instead of paying him in money we made an agreement with him to remain with us for five years and take charge of our sheet-iron and tin work, which he understood, and pay him a salary of, I think, twenty-three hundred dollars a year.

Q. 11. Describe the stoves which he brought to you.

A. One of the stoves was what was called a parlor double heater; the other was a fire-place stove.

Q. 12. Describe the construction of that fire-place stove.

A. There was but one stove he had to show us, and the patent that he had in this fire-place stove was the peculiar manner in which the products of combustion was carried down the back and around the base. There were other claims for the peculiar construction of the hot air which I do not remember, not having looked at the patent for several years.

Q. 13. Question repeated.

A. I cannot describe the construction any better than I have done in my previous answer except I have the patent here to examine.

Q. 14. Had it a magazine feed?

A. It had not.

Q. 15. Did it stand out in front of the mantel frame some distance; if so, how much?

A. Having seen but the one stove and not paid much attention to the standing-out part of it I have no recollection whether it stood out much or little.

Q. 16. What patent did he sell your firm on this heater?

340 A. As I said before, I do not remember anything further about the claims that Lewis Bridge made than I have before stated.

Q. 17. In whose name was the patent issued?

A. I think the patent was issued in the name of Lewis Bridge, but think there was a man by the name of Boll who owned part of the patent.

Q. 18. How long had the patent been granted when Bridge came to your firm.

Objected to as incompetent.

A. I think in 1866 the patent was granted.

Q. 19. Where did Lewis Bridge say he worked previous to coming to your firm.

Same objection.

A. He had a shop or store of his own in Little York, in which he sold stoves and tin-ware; doing business in his own name, so he told me.

Q. 20. You took out a patent with Lewis Bridge, did you not?

A. Yes.

Q. 21. On one of the stoves which he brought you in 1867 or thereabouts?

A. I think on both of them.

Q. 22. Do you mean to say that Bridge and yourself took out a patent which covered both stoves, which he, Bridge, brought to your firm in 1867?

A. We took out patents for some improvement that was made in both of the stoves.

Q. 23. How many patents did you and Bridge take out on the two stoves.

A. There were several patents taken out on these two stoves. I do not remember; perhaps as many as six or seven.

Q. 24. Did all the patents show a magazine feed?

Objected to as incompetent.

A. Yes.

Q. 25. Which of those two stoves brought by Lewis Bridge to your firm had a magazine feed in it.

A. I want to correct my testimony. The outstanding parlor

double heater when first made by us had no magazine. Neither of the stoves when brought to us by Lewis Bridge had any magazine in them.

341 Q. 26. Then how do you account for the six or seven patents taken out on those two stoves showing magazines in them.

Objected to as incompetent and as assuming what in not proved.

A. We took out a patent for a top screen to cover the top feed of the fire-place stove. That was one patent. One other patent was taken out for the peculiar manner in which the fender was attached to the fire-place stove. Another patent was taken out for the peculiar style of the mica lights in the fire-place stove. More than them three at present I cannot remember. We also took out (whether that was in Lewis Bridge's name alone or in both I do not remember) a patent for a top feed in the fire-place stove. Whether this top-feed patent was absolutely granted to us upon the application I made I forget at this time.

Q. 27. How soon was that application made after Lewis Bridge came to your firm—immediately?

Objected to as incompetent.

A. I do not remember.

Q. 28. State as near as you can.

A. I can only remember that the Thatcher Heating Company showed us positive proof that they were ahead of us in this invention of top feed for fire-place stove, and we purchased one-fourth of their patent for the top-feed fire-place stove.

Q. 29. How did the Thatcher Heating Company show you proof?

A. That I do not remember at this time. It is so long since.

Q. 30. Was it by the assertions of the Thatcher Heating Company that they thought they were ahead of you?

Objected to as already answered.

A. I think not. They must have shown us very positive proof before we paid them the money.

Q. 31. What proof did they show you?

Objected to as already answered.

A. I do not remember what the proofs were; I only know that the proof must have been very convincing.

342 Q. 32. Why do you think it was very convincing; what leads you to think so?

Objected to as already answered.

A. Because we make it a rule never to pay money without being absolutely certain that we have its worth.

Q. 33. Did the Thatcher Heating Co. show you any models for stoves or heaters containing magazine feed?

A. I think not. If they showed us anything I think it was only the drawings.

Q. 34. What kind of drawings; were they large or small on what kind of paper, and were they in ink or in pencil?

A. I don't remember.

Adjourned to Wednesday, February 13th, 1878, 11 a. m.

NEW YORK, *February 13th*, 1878—11 a. m.

[Met] pursuant to adjournment.

Present: Counsel as before.

Examination of DAVID STUART continued:

Q. 35. The three patents referred to in your answer to Q. 26—did they show in the drawings thereof a magazine feed?

Objected to as incompetent. The patents will speak for themselves.

A. I think they did.

Q. 36. Do you recollect the dates of these patents, or the years in which they were taken out?

Same objection.

A. I do not remember.

Q. 37. Were these three patents generally on stoves?

Same objection.

A. Do you mean to ask whether they were intended for fire-place stoves, or for all kinds of stoves? I do not exactly understand the meaning of the question.

Q. 38. How many different classes of stoves are there? Name them.

A. There are cooking stoves, parlor stoves for coal, parlor stoves for wood, box stoves for wood; there are fire-place ranges, outstanding ranges, fire-place stoves, and likely a number of others which I can't think of at this time.

343 Q. 39. Why do you call a stove a "parlor stove?"

A. Because they are generally known under that name with the trade.

Q. 40. Are they not called parlor stoves because they are used for heating parlors or sitting or drawing rooms?

A. I suppose when they were first named parlor stoves it was because the manufacturers and the trade generally wished to give them as high-sounding name as they could to make them more salable; but I have seen some of the finest parlor stoves used in the meanest kind of bar-rooms.

Q. 41. Why do you call a range a "fire-place range?"

A. Because such ranges are generally built into the fire-place of the house.

Q. 42. And are not such ranges also used outside of the fire-place, and when so used what are they called?

A. There are ranges used outside of the fire-place, but of a different construction from those that are built in the fire-place.

Q. 43. How do they differ in construction from those built in the fire-place?

A. They are built with brick flues generally, and enclosed in a brick casing, while the outstanding range is complete in itself, and can be used outside of the fire-place, and sometimes in the summer they might be shoved in the fire-place and a pipe put up the chimney for the purpose of carrying off the products of combustion.

Q. 44. When so put into the fire-place with a pipe up the chimney, as stated in the last part of your last answer, would it not be a fire-place range?

A. It might be called a fire-place range, if the owner chose to call it so, and when he took it out and used it outside of the fire-place he might then call it an outstanding range, and by this means he might make some of his friends think he had two ranges.

Q. 45. Do you not make and sell fire-place ranges?

A. We do.

Q. 46. Are not such ranges also sold and put up by you as outstanding ranges when so required by your customers?

A. They are not.

344 Q. 47. Do you make and sell outstanding ranges?

A. We do.

Q. 48. How do they differ, if at all, from the ranges which you sell to be inserted into fire-places? Confine yourself to the range itself.

Objected to as already answered.

A. The outstanding range is complete in itself, the sides and back of the range being complete plates, and all the parts complete in themselves; the fire-place range, the back—the back is not closed up—have openings to build brick flues; being placed in the fire-place it is not necessary that the back plates and parts that are built in the brick should be entire.

Q. 49. Then the only difference between the two structures which you make for these purposes is that the back plates, or back and side plates, which form walls of the flues in the structure for insertion in the fire-place are left off to be supplied by walls of brick-work built upon the fire-place. Is this what I am to understand by your last answer?

A. There is a difference in the shape of the two; the fire-place range is constructed in shape and style to suit building in a brick wall or casing, while the outstanding stove is not: you might so understand with my last explanation.

Q. 50. Now, if you should take one of these ranges having the back and side plates in it, or, in other words, with the flues entirely of metal castings, and place it in a fire-place, would you not thereby save the building up of a portion of the flues or walls of the range in brick-work?

A. You would if the range had the flues constructed within itself.

Q. 51. Have not all outstanding ranges the flues constructed within themselves—that is, within the body of the range?

A. They have.

Q. 52. Do you know that at the present time, in this market and in the Philadelphia market, it is not the custom to supply any portion of the flues with brick-work, but to take the range as it is constructed as an outstanding range and insert it into the fire-
345 place as a fire-place range, with a smoke-pipe from the top collar of the range to lead the products of com[bustion] up into the smoke-flue of the chimney. Will you testify to the contrary of this?

A. I know that there are such ranges made that have the flues entirely in themselves, as described, but I understood the question previously put about the kind of ranges that we made, and we make no brick-built ranges with flues entire within the body of the range.

Q. 53. When I asked you in Q. 38 about the different classes of stoves I did not limit you to stoves of your manufacture, and I therefore desire you to consider all the questions put since that question as referring to stoves and ranges made by the trade generally, except where you have compelled me to specifically limit the question. Now, do you mean to testify that your fire-place ranges have no cast-[iron] end plates on them?

Objected to as indefinite.

A. Our fire-place ranges have cast-iron end plates on them.

Q. 54. Describe that class of stoves you call "parlor stoves;" that is, give me the elements which go to constitute such a stove in its general construction, not its detail construction. Take as an illustration a magazine feed parlor stove having the magazine feed come up to the top plate of the stove, with a feed hole in such top plate for supplying such magazine with fuel.

A. Commencing at the bottom of the parlor stove described, it has an ash-pit for containing the ashes, a grate above the ash-pit, a fire-box for containing fuel, and in the generality of such stoves there is a magazine to contain coal for feeding the fire-box; there are mica lights above the fire-box and also opposite the grate in the generality of such stoves; above the upper mica lights there is a round column of cast-iron reaching up to the top. Manufacturers differ somewhat in the construction, in the form, the number of mica lights, and other details, but the general construction is as I have described. By round column of cast-iron I mean the upper top which contains the magazine.

346 Q. 55. In this element which you say contains the magazine are not the gases mixed, mingled, and consumed—that is, in the space between this magazine and the outer wall or round column of the stove?

A. It may be possible that the gases are somewhat consumed there, but I have never experimented on consuming the gases in the space described, and therefore cannot say how far they are consumed or how far they are not consumed.

Q. 56. Do you not think that such space is necessary to the proper operation of the stove or of a fire-place heater?

A. It is certainly a very great improvement to either stove.

Q. 57. Describe that class of stoves which you call fire-place stoves

or heaters—that is, give me the elements which go to constitute such a stove in its general construction, taking as an illustration a magazine fire-place stove or heater having the magazine come up to the top plate of the stove, with a feed hole in such top plate for supplying such magazine with fuel, without reference to arrangement of flues for conducting off caloric or the products of combustion.

Objected to as indefinite.

A. The fire-place stove, such as is described, has ash-pit, grate, fire-box, and a magazine for containing coal, same as described in the parlor stove, but is a very great improvement on the parlor stove by being arranged to fit into a fire-place, part of the stove standing out in the room and part in the fire-place. This description of stove, previous to the invention of a magazine for the same, was very inconvenient, as fire could not be kept in it for any length of time, and the heating capacity being so much superior to the outstanding stoves in consequence of the products of combustion heating the back parts within the fire-place before passing off. I think that is as near a description of it as I can give.

Defendants' counsel objects to that part of the answer which is argumentative, witness being a party in interest and *was* only asked to give the elements which exist in a class of
347 stoves which he terms fire-place stoves in his answer to Q. 38—that is, all of the answer which does not state such elements as go to make up such fire-place stoves is objected to as volunteered, such objectionable language commencing as follows: "But is a very great improvement on the parlor stove by being arranged to fit into a fire-place," &c. Also in the next paragraph commencing with the words, "This description of stove previous to the invention of a magazine," &c., down to the end of the paragraph.

Q. 58. What is the size of the grate surface of an ordinary fire-place stove or heater containing magazine feed within the cylinder thereof, with top feed hole to such magazine?

A. The grate surface varies in different stoves of that kind; I think they generally run about 12 inches, but I may be mistaken; it may be a little more or less.

Q. 59. What is the depth of fire-pot in such a fire-place stove or heater, with 12 inches of grate surface?

A. I should think about 5 or 6 inches.

Q. 60. What is the distance from the grate surface to the lower end of the magazine feed in a perpendicular direction with such a grate surface and depth of fire-pot?

A. I think if the fire-pot was 5 inches deep that the distance would be about 7 inches.

Q. 61. With such grate surface, depth of fire-pot, and height of magazine above the grate surface, what would be the distance from the bottom of the magazine up to the top of the stove or upper end of the magazine?

A. According to the best of my recollection, in the fire-place stove that we make the height would be about 12 inches, speaking entirely from recollection; I may be mistaken some inches in the measurement, perhaps some 2 or 3 inches in the entire height, from the grate surface up to the top of the stove.

Q. 62. Have not outstanding stoves containing a magazine
348 feed existed with a grate surface of about 12 inches?

A. There have; according to the size of the stove they make the grate.

Q. 63. With such a size of grate surface, what would be the depth of fire-pot in such a stove?

A. Manufacturers differ in the depth of their fire-pots; I think they likely might run from 5 to 8 inches.

Q. 64. In such a stove having 12 inches grate surface, 5 inches depth fire-pot, what would be the distance from the grate surface to the lower end of the magazine feed in a perpendicular direction?

A. In a fire-pot 7 inches high the distance would be about 9 inches and vary about the same proportion according to the depth of the fire-pot.

Answer objected to as not responsive.

Q. 65. Question repeated.

A. Well, 7 inches; it may be less or more according to the views of different manufacturers.

Q. 66. In such a stove of 12 inches grate surface, 5 inches depth of fire-pot, and 7 inches from grate surface to lower end of magazine feed, what would be the distance from bottom of magazine up to the opening in the top of the stove or upper end of magazine where the coal is introduced into the stove?

A. The distance varies considerably in cheap and high-priced stoves and stoves made by different manufacturers.

Q. 67. Give the extreme, each way, in a stove containing the dimensions referred to in the last question.

A. That's a very difficult question for me to answer, and I may be mistaken, as I never have done more than look at them without measuring any; I think they might run from 12 to 14 or 15 inches.

Q. 68. Suppose you should set out in a room an outstanding stove of the measurements last referred to; namely, grate surface 12 inches diameter, 5 inches depth of fire-pot, 7 inches grate surface from lower end of magazine, and 12 inches length of magazine as stated, and also a fire-place stove or heater containing the same measurement of such elements as you have testified, side by side,
349 which would give out, if fed alike, the greatest amount of heat?

A. Do you mean to ask which would give out the greatest amount of heat in the room in which they stand?

Q. 69. Yes, sir; both being placed out in a room.

A. I think the fire-place heater would give out the greatest amount of heat, as they have projected the front out in the room in the modern stoves, and the parlor stove is contracted in the upper top, thus giving more radiating surface to the fire-place stove.

Q. 70. Please confine yourself in your answer to outstanding stoves which have the fronts and tops projecting out and as large as the fronts and tops of the stove in the fire-place stove, which would make the area of radiating surface the same in both the outstanding stove and the fire-place stove.

A. If you have a parlor stove made to project equally as far into the room as the front of the fire-place stove projects, of course you would get fully as much heat in the room, as you have the same amount of radiation in both in that case.

Q. 71. Do not misunderstand the question. One of the conditions is that both the outstanding stove and the fire-place stove are placed in the middle of the room, and another that they have in the chamber above the grates and fire-pot the same area of radiating surface. Now, please answer Q. 68 with these explanations.

A. I can't comprehend the question. The difference in shape and style of the two stoves is so great that I cannot understand whether you mean the fire-place stove to be placed in the middle of the room with the back elements attached thereto for the heating of the upper rooms, or whether you intend to detach the back part of the fire-place stove and merely use the front or projecting part to use in the middle of the room.

Q. 72. I mean that you shall use in the middle of the room, as you must of necessity if it is located there, both halves of the fire-place stove, as such fire-place stove is assumed to be entirely isolated from the fire-place, and only connected to a flue in the fire-place by a smoke-pipe, and also answer the question without reference
350 to any back elements of fire-place heaters, as some fire-place heaters have them in various forms and modified shapes, and some do not have them at all. Therefore, assume the fire-place heater as divested of any supplemental radiating surface at the rear.

Objected to as assuming what is not proved.

A. The parlor stove and the fire-place stove placed in the centre of the room, as assumed, and being of equal size, both in grate surface and other ways, both having the same radiating surface, would, of course, give out the same amount of heat in the room.

Q. 73. Would not these two stoves referred to, if each was placed in a fire-place, so as to be half way in each fire-place and half way in the room, the outstanding stove having a proper front so as to close the space between the fire-place and the room, and each having the usual connecting pipes with a smoke-flue and the apartment above, give out each the same amount of heat to the apartment in which they are placed and the apartment above?

A. If you intend to make a fire-place stove out of the parlor or outstanding stove, with all the advantages of style and shape that the present fire-place stoves have, and make equally as good connections and heating apparatus in the one stove as in the other, you could get equally as much heat, but not otherwise.

Q. 74. Question repeated.

Witness being requested to confine himself to the conditions of the question in the giving of his answer, as, with his argument, his present answer might be considered an answer to the question and it might not.

Objected to as already fully answered.

A. I have answered the question according to the best of my judgment, and I know of no other way of answering it to satisfy my own sense of what is just and correct to all parties concerned.

Q. 75. Would not the outstanding stove referred to give out as much heat in the aggregate if placed half way in a fire-place, as conditioned in the last question, as it would when placed in the middle of the room?

351 Objected to as indefinite.

A. If it was half way in the fire-place part of the heat would go up the chimney and not so much in the room, and in case of the entire stove being placed in the room you would get all the heat made by the stove in the room.

Q. 76. I did not ask you where the heat would go to, but asked whether the outstanding stove would not give out as much heat in the one location as in the other?

Objected to as already answered, and as indefinite in respect to the meaning of the words "give out."

A. There would be no difference in the amount of heat given out.

Q. 77. If the other stove, namely, the fire-place stove or heater referred to, were placed half way in a fire-place would it not give out as much heat in the aggregate as when placed in the middle of the room?

A. I don't understand the question.

Q. 78. I mean would its location make any difference in its heating capacity; would it not give out as much heat if inserted half way, or thereabouts, into a fire-place as it would if located in the middle of the room?

Objected to as indefinite.

A. The location would make no difference if there is equally as much radiating surface in the one case as in the other.

Q. 79. Now, if each of these stoves is placed about half way in a fire-place, and each one having a proper frame, so as to close the heat radiated from the rear half of the stove from coming out into the room in which the stoves are placed, would not each of these stoves give out as much heat to the upper apartment as the other?

A. If both stoves were of the same size and projected equally as far in the room and in the chimney, and each had the same radiating surface in every respect, they would give out the same amount of heat to the upper apartment and to the room as well.

352 Q. 80. Would you not, then, in both cases call them fire-place heaters?

A. I would call them a sort of apology for a fire-place heater.

Cross-examined:

X Q. 81. Is not a fire-place stove, properly speaking, substantially both a stove and a hot-air furnace?

A. It is.

Redirect:

R. D. Q. 82. Does not your last answer apply to all fire-place stoves or heaters, whether such stoves or heaters have or have not magazine feeds in them?

A. The fire-place heaters have the proper connections at the back to utilize the heat before it passes off into the chimney; it is then a stove and a hot-air furnace.

R. D. Q. 83. Did you not put "if" at the commencement of your last answer, as I understood you to say so, and is it not necessary to make good sense of your last answer?

Objected to, as the answer is obviously good sense, and the correctness of the examiner's taking down the answer cannot be corrected in any such way, and counsel for complainant desires the examiner to note that the witness has already had the answer read to him twice by the examiner.

A. I think the answer is the same as I gave; whether it is good sense or not I will leave others to judge.

Answer objected to as not responsive. Complainants' counsel joins in the objection—that the answer was not responsive, and hopes that the witness will answer it directly.

R. D. Q. 84. 82 question repeated.

A. It does.

R. D. Q. 85. Are not outstanding stoves, as they are frequently made, both a stove and a hot-air furnace—that is, do they not give heat out to the room in which they are placed, and also have heat from them conducted up into the apartment above?

A. There are such stoves made, but they cut off the greater part of the heat—that is, from the stove by having a sheet-iron casing around the upper top, having a current of cold air passing
353 between the sheet-iron and the top carrying hot air up into the upper room, thus cutting off from the parlor all the heat made by the upper top of the stove.

R. D. Q. 86. What is the improved Juniata double heater made and sold by you, of which you state in your catalogue that there is no jacket attached to prevent the free radiation of the heat? Does not this heater while heating the upper apartment radiate off a considerable body of heat to the room in which it is placed, and is it not both a parlor stove and a hot-air furnace?

A. It gives out more heat in the room in which it is placed than the generality of double heaters, but there is a great deal of heat lost in consequence of a sheet-iron casing being around half the cylinder or fire-pot, and the pipes which conduct the hot air to the

upper room also prevent a good deal of the heat from radiating in the room in which the double heater is placed; I have never heard the double heaters called a stove and hot-air furnace.

R. D. Q. 87. Does not the radiating of heat into the room and the passing of heat into the upper apartment make the respective stoves, namely, the double heater and the fire-place heater, the one as much a "stove and hot-air furnace" as the other?

A. No; for the reason that in the fire-place stove you get the entire radiation and benefit of all the heat made by the fire, and it passes up around the magazine and then utilizes the products of combustion for heating the drums and fixtures in the fire-place to give heat in the upper rooms, not obstructing in any way all the heat created by the stove proper, for the reason that the heat is utilized back of the fire-place heater in the chimney as is done by a number of our best hot-air furnaces; it may be properly, and has been, called a stove and hot-air furnace.

R. D. Q. 88. I have repeatedly requested you not to refer to any additional elements placed at the rear of the fire-place heaters, which you seem inclined to forget. Now state if, in a fire-place heater without such additional elements, there is but one-half of the body of the heater to act as a radiating surface in a hot-air furnace chamber, while in an outstanding stove partly cased, as you have
354 described, there is only that portion of the stove to act as a radiating surface, as if it were within a hot-air furnace enclosure, while the remainder of the stove is exposed to radiate heat into the room, substantially as that portion of the fire-place heater, which extends into the room, radiates heat into the room. Am I not correct in this?

Objected to as indefinite.

A. It is partly correct; but the fire-place heater having a great deal of projecting and surface, I think it would give a great deal more heat in the room in which it stands than a case double heater such as described.

R. D. Q. 89. What, then, do you mean by your statement on page 48 of your circular with reference to this Juniata heater—"intense regulating currents of heated air without obstruction to direct radiation?" And look at the cross-section on page 49 of said circular. Do you not, on the contrary, get a great amount of direct radiating surface to the room in which the stove is placed, fully equal to the radiating surface into the room from a fire-place heater?

A. The circulars generally are written and circulated by manufacturers with a good deal of puff, and don't always come up to what they say, but when you get an old man nearly 70 years of age on the stand to declare what his knowledge is on oath he ought to be very careful and only tell what he knows and he thinks, which I have done throughout this examination, as near as my recollection and judgment allowed me.

R. D. Q. 90. Does not page 49 of your circular or catalogue represent the Juniata stove in cross-section?

A. Yes; it is a cross-section. Page 49 of the circular is marked for identification Defendants' Exhibit Stuart.

R. D. Q. 91. Are not fire-place heaters constructed without connections at the back to utilize the heat before such heat passes off into the chimney—I mean, is not heat radiated directly from the rear half of the fire-place heater into the fire-place for direct passage up into the apartment above?

Objected to as indefinite.

355 A. I do not remember that I have ever seen such heaters in use.

R. D. Q. 92. Please look at the heater Defendants' Exhibit Budd No. 1 and state whether that is not such a heater.

A. I have examined the heater, and find that it has no radiating drums or fixtures at the back, but the stove-pipe attached to the heater is so placed that the radiating drums to utilize the products of combustion could easily be attached.

All after the words "at the back" objected to as volunteered by the witness and as not being evidence, the witness drawing on his imagination in the making of the assertion found after such words.

DAVID STUART.

Sworn to before me this February 13, 1878.

JOHN SHIELDS,
Examiner, &c.

Adjourned to Monday, February 18th, 1878, at 11 a. m.

TUESDAY, *February 26th*, 1878.

Met pursuant to adjournment.

Counsel for defendants puts in evidence drawing of letters patent No. 23716, dated April 19th, 1859, and granted to S. B. Sexton for "Magazine fire-place stove," marked Defendants' Exhibit No. 1.

Counsel for defendants put in evidence drawing of letters patent granted to W. J. Cantelo for coal-stove, No. 24539, dated June 28th, 1859, marked "Defendants' Exhibit No. 2;" also letters patent No. 1172, whole No. 32176, dated April 30, 1861, granted to B. C. Bibb and H. Angee for stoves, and marked "Defendants' Exhibit
356 No. 3;" also reissue of the same, dated June 11, 1872, reissue No. 4941, for improvement in base-burning fire-place heaters, granted to Bently C. Bill and Henry Angee, said Angee assignor to David Stuart and Richard Peterson, and marked Defendants' Exhibit No. 4; also letters patent No. 1253, whole No. 32257, dated May 7, 1861, for stoves, and granted to J. G. Treadwell and William Hailes, of Albany, N. Y., and marked Defendants' Exhibit No. 5; also letters patent No. 1924, whole No. 32928, dated July 30th, 1861, granted to James Spear, of Philadelphia, Penn., for fire-board stove, and marked Defendants' Exhibit No. 6; also letters patent No. 2341, whole No. 33345, dated September 24, 1861, granted to R. D. Grangor for stoves, and marked Defendants' Exhibit No. 7; also

letters patent No. 2363, whole No. 33367, dated September 24, 1861, granted to Benjamin T. Roney, of Bristol, Penn., for coal-stoves, and marked Defendants' Exhibit No. 8; also reissue of the same, dated October 8, 1872, reissue No. 5096, for improvement in base-burning stoves, granted to Benjamin T. Roney, assignor by mesne assignments to Adam R. Reese, of Phillipsburgh, New Jersey, and marked Defendants' Exhibit No. 9; also drawing of letters patent, for magazine stove, granted to S. B. Sexton, No. 47136, dated April 4, 1865, and marked Defendants' Exhibit No. 10; also drawing of letters patent for magazine stove, granted to W. B. Treadwell, No. 47881, dated May 23, 1866, and marked Defendants' Exhibit No. 11; also letters patent, for improvement in fire-place heaters, granted to W. C. Lesster, of New York, N. Y., No. 61623, dated January 29, 1867, and marked Defendants' Exhibit No. 12; also
357 letters patent, for coal-stove, granted to William C. Durant, of West Troy, N. Y., No. 66957, dated July 23, 1867, and marked Defendants' Exhibit No. 13; also letters patent, for improvement in base-burning stoves, granted to David Stuart and Lewis Bridge, of Philadelphia, Pennsylvania, assignors to Stuart, Peterson & Co., of same place, No. 77549, dated May 5, 1868, and marked Defendants' Exhibit No. 14; also letters patent granted to Abraham K. Sanders, of Brooklyn, N. Y., for improvement in base-burning stoves, No. 80016, dated July 14, 1868, and marked Defendants' Exhibit No. 15; also English letters patent, granted in the year 1830, to Joel Benedict Nott, for furnace with rotary cylindrical grate, tubular boiler, heating apparatus, &c., No. 6026, and marked Defendants' Exhibit No. 16; also English letters patent, granted A. D. 1839, to William Harper and Thomas Walker, for stoves and grates, No. 8065, and marked Defendants' Exhibit No. 17; also English letters patent, granted A. D. 1842, to Thomas Walker, for stoves, No. 9440, and marked Defendants' Exhibit No. 18.

358 U. S. Circuit Court, Southern District of New York.

THE THATCHER HEATING COMPANY *et al.*

vs.

JOHN H. BURTIS and JOHN M. GRAFF.

Testimony taken on the part of the defendants under and pursuant to the 67th rule of the Supreme Court of the United States, as amended, before John A. Shields, a standing examiner of said Court.

NEW YORK, *January 10th*, 1880.

Present: A. J. Todd, Esq., of counsel for defendants, and Wm. H. L. Lee, Esq., of counsel for complainants.

ELIZA M. SHEPARD, a witness produced on the part of the defendants, being duly sworn, deposes and says:

The examination of this witness is postponed until 3 o'clock p. m. Further postponed until Tuesday, January 13, 1880, at 3 p. m.

WILLIAM M. GRAY, a witness produced on the part of the defendants, being duly sworn, deposes and says:

Q. 1. What is your name, age, residence, and occupation?

A. William M. Gray; I am 40 years of age; I reside at 420 Pacific street, Brooklyn, New York, and I am a clerk for Miss E. M. Shepard, executrix of the estate of Charles J. Shepard.

Q. 2. Is there any other clerk who has charge over you or above you in the establishment?

A. No, sir.

359 Q. 3. Where is that establishment located in this city?

A. 242 Water street.

Q. 4. Have you had an application to permit the defendants, or some one in their interest, to see an old fire-place heater, which was made in the lifetime of Charles J. Shepard, and which is believed to be in said establishment, 242 Water street, and did you not refuse that application?

A. Mr. Rice called on me; introduced himself as Mr. Rice—I had not met him before—and wished to know if he could see an old fire-place heater that had been shown him by Charles J. Shepard shortly before his death. I told him that I had orders from my employer to permit no one except those under her employ, or by her written order, to go through the building for any purpose whatsoever; that is, above the store floor—the lofts.

Q. 5. Did not a gentleman call a few days previous to Mr. Rice's calling, namely, a Mr. Low, with an order from Miss Shepard, the executrix, to see said heater, and was he not met by you with a refusal and countermand of the order, which you obtained from the executrix that same day, or the day previous to his calling?

A. No, sir.

Q. 6. What were the circumstances of that refusal or countermand?

The witness said before the question was completed—

A. I made no refusal.

Q. 7. State the facts connected with that countermand.

A. There was no order made on me to show anything in the building.

Q. 8. On whom was it made?

A. I received a note from Miss Shepard, addressed to a Mr. Low, who had obtained a card requesting a man by the name of Hassen, a porter in the store, to show a certain stove that the bearer wished to see, that he (Low) believed was in the building. This note, as I understood from Mr. Low when he called with the said card or order, was countermanding said order and card.

360 Q. 9. When you received that countermand from Miss Shepard, the executrix, did she give you any reason for countermanding?

A. Nothing further than what this note showed Mr. Low, which, she said, would explain itself.

Q. 10. Had you any conversation with her previous to her writing this countermand about the matter?

A. Nothing directly.

Q. 11. What indirectly?

A. She stated the night previous, when I called on business connected with my clerking duties, that a party had called upon her and made enquiry of a certain stove which he believed was in her possession, and asked me if I had seen such a person, or had he made application to me personally. She described him and stated his name was Low; I said, in answer to that, that I did not remember ever having seen or known a party by that name or description, except it might have been a gentleman in the employ (I don't know whether he is in the employ or whether he is connected with the firm) of Richardson, Boynton & Co., who called in the store to enquire if we had repairs for a cylinder stove. He only wanted, he said, a grate, and gave the dimensions of the diameter. While the porter was looking through some old castings to see if he had a grate of that description he walked around the store examining the goods on exhibition, and introduced himself finally as from the house of Richardson & Boynton, but did not state his name; he made enquiries about the syphonic fire-place heater that Mr. Shepard had formerly sold and wished to know if we had one, or was there one complete, and what we would charge him for it, as he wished it as a relic, and would I let him know what the price would be. Not finding the grate or repairs that he made enquiry for he left the store.

Q. 12. Were you present when Hassen told him that he could not see the fire-place heater? And give the conversation that took place between him (Low) and Hassen on that occasion.

A. I was in the back office of the store 242 Water street, and Mr. Low came into the back office accompanied by Hassen, he (Hassen) carrying in his hand the card which Mr. Low handed to
361 him, or the one he said he handed to him, as I did not see him do so. He handed said card to me, and I handed the note previously delivered to me by E. M. Shepard to deliver to Mr. Low. On receipt of the card from Mr. Hassen I did so, but was not present when Mr. Low met Hassen at the door of the store, and did not hear any conversation between them.

Q. 13. Please look at the note now shown you, called Def'ts' Exh. Gray No. 1, and state is that the note referred to in your last answer.

A. Yes.

Q. 14. What is Hassen's full name, and where does he live, and is he over or under you?

A. His name is Michael Hassen, I believe; I do not know his residence; he is neither over or under me, as we are employed by Miss E. M. Shephard to perform our several duties under her directions.

Adjourned until Tuesday, January 13th, 1880, at 12 o'clock m.

N. Y., *January 13th*, 1880—3 p. m.

The witness, ELIZA M. SHEPHARD, present pursuant to adjournment, and examination continued:

Q. 1. Please state your name and residence.

A. My name is Eliza M. Shephard; I reside at No. 322 Atlantic street, in the city of Brooklyn.

Q. 2. Are you the executrix of the estate of Charles J. Shephard, deceased?

A. I am.

Q. 3. Were you not subpœnaed to produce in evidence a fire-place heater said to have been the property of Charles J. Shephard, deceased, in his lifetime, and now under your control as his executrix, in the warehouse No. 242 Water street, in the city of New York?

A. I was not summoned to that effect at first; on a second subpœna, I think you call it, I was. If you will interline the word "Notts," preceding the word "fire-place" heater.

362 Q. 4. Will you produce such fire-place heater that it may be referred to in evidence and inspected by the court, the defendants paying all the expenses attendant its production?

A. I decline to do so unless obligated to do it.

Q. 5. Why do you decline unless obligated to do it?

A. For several reasons.

Q. 6. Please state these reasons.

A. One, that I am not assured that there is such an article there, and Mr. Todd was to entertain a proposition from me which he had not replied to as yet.

Q. 7. Any more reasons? If so, state them.

A. I should prefer not to state them all unless obliged to.

Q. 8. Please state any further reasons you have for not permitting such fire-place heater to be produced in evidence at the expense of the defendants.

A. Another reason that I have not heard but one side of the question, and my desire is to hear both sides of the question before deciding in the matter. There is another reason, possibly I have a latent interest in the matter which I desire to learn.

Q. 9. What is there you wish to know about the other side of the case before you will produce such fire-place heater?

A. To know whether doing what is desired of me I shall favor the one individual or the many individuals; in other words, the one individual means the plaintiff, I take it, the many individuals, the defendants.

Q. 10. Why should it make any difference to you whether it is the one or the many that is favored, since you are called as a witness to impartially aid in proving a fact?

A. I prefer always in cause of justice and right to take the side of the weaker party.

Q. 11. Why do you think also that you have a latent interest in the matter?

A. Because I was approached so peculiarly at first in regard to the matter, and also through the 3½ years in which the matter seems to have been standing or pending.

Q. 12. You gave, did you not——

363 The witness says: May I add something to the answer that really belongs to it?

Also, that I think my brother was approached during his lifetime, and he did not do what, perhaps, may have been wished of him; I desire to do the same in this matter.

Q. 13. You gave, did you not, to a Mr. Low an order to look at a fire-place heater, and when he went to deliver such order on the porter at 242 Water street, to whom it was addressed, was he not met with a countermand of such order, which countermand is marked Defendants' Exhibit Gray No. 1?

Objected to on the ground that the witness is asked to testify as to matters not within her own knowledge.

A. I did not; I did give an order in regard to a stove and I did countermand that order.

Q. 14. Did you not understand that stove which Mr. Low wanted to see was the same thing as the fire-place heater which we now want to see and have here called for?

A. I presume it to have been so, but a guiding Providence made me say stove, which I do not understand the 2 to be synonymous.

Q. 15. Witness is asked to identify Defendants' Exhibit Gray No. 1.

A. It is correct.

Q. 16. What reason or reasons had you for refusing Mr. Low an examination of this heater or stove?

A. The exhibit answers that question.

Q. 17. Exhibit says, "There are reasons that did not occur to me." I mean what were those reasons which you say did not occur to you until more mature thought, after Mr. Low left?

A. The recalling while at rest of an interview had between my brother a very short time previous to his death and a Mr. Burtis, I think.

Q. 18. Why should that have been a reason for writing the countermand?

A. My brother did not entertain favorable views in regard to some matters that he had with Mr. Burtis.

364 Q. 19. Why did you give such note and countermand, if, as you say, in answer to 6th question, that you are not "assured that there is such an article there?"

A. I was not specially assured and do not know yet that there is such an article there.

Q. 20. Have you yourself looked to see if there is such an article there?

A. I made an examination of one floor and found a syphonic fire-place heater, I think they call it; I think it goes by that name.

Q. 21. When did you make this examination?

A. Recently; since the defendants' desire to know in regard to the matter.

Q. 22. On what floor or loft was this examination made at 242 Water street?

A. I don't know how they call the lofts; on the first floor, or store floor.

Q. 23. Did you think that was the heater the defendants were in pursuit of, and was that the reason why you did not look any further through that building?

A. I did not, for it bore a different name, but I knew of no other.

Q. 24. Why did you not look further through that building, if it is, as you say, that you supposed that that was not the heater, it bearing a different name?

A. I do not like to take too much trouble in my state of health, and prefer not to ascend to such a dusty place; my health has been such for some years that I do not allow myself to go up and down stairs more than is possible and under my physician's wish.

Q. 25. Could you not have overcome the last objection by sending Mr. Gray up—your clerk?

A. He is quite new in my employ, comparatively speaking, and I should not have known what to send him to search for.

Q. 26. What day was it you made this examination on your store floor?

A. I can't tell; I have no date to go on or to go by.

Q. 27. Was it after my interview with you at your counsel's office, Mr. Norwood—the day on which you were first subpœnaed to attend and give your evidence; was it that afternoon?

A. I cannot recall.

365 Q. 28. Did I not request you at that interview to permit either myself or a Mr. Rice to accompany yourself and Mr. Gray, your clerk, to make an examination at your establishment, 242 Water street, in order to find such fire-place heater, and did you not refuse such request?

A. There was a request something after that tenure; when you go into names I cannot say, in regard to it, I did decline.

Q. 29. Do you still decline to have either Mr. Rice or myself, or both of us, accompany Mr. Gray through the lofts or upper stories of that establishment, 242 Water street, for the purpose of seeing such fire-place heater, or the patterns for it, or both?

A. I decline to have anything to do with Mr. Rice in regard to his matter.

Q. 30. Will you permit Mr. Andrew Brown, who has already testified in this case, and who, I believe, does your foundry or some of your foundry work, [to] go through that establishment with Mr. Gray and myself for the purpose stated?

A. I decline to do so, as Mr. Andrew Brown has already trespassed on my premises, accompanied by J. H. Burtis, in contradiction to all orders in regard to persons seeing the premises, or what they contain, without a special permit, from myself, which they did not get nor made application for.

Q. 31. How far did Brown & Burtis get into said premises?

A. I think they were not seen until they had ascended the stairs to the first floor, one flight up, and were then requested to descend—per-

sisted, and went further—went through the loft, I understand—went through that floor—where they said what they desired to see could be found.

Q. 32. What proposition do you refer to in your 6th answer, in which you say, I have not replied to as yet, as a reason for declining?

A. I made a proposition, which I wished interested parties to entertain, that if there was such an article, and they desired it, it could be had by purchasing the stock, good-will, etc., for the sum of $20,000.

366 Q. 33. Did you not understand me to say, in presence of Mr. Rice this afternoon, just before this examination begun, and did he not reiterate my statement, that such proposition could not be made to and would scarcely be entertained by the parties in interest?

A. I had previously said that I preferred to have nothing to do with Mr. Rice, and, moreover, Mr. Todd had said to me that he thought my proposition just, and he saw no reason why the defendants should not consider my proposition, as it was only reasonable.

Q. 34. Now, please answer my last question, whether I did not state to you in presence of Mr. Rice as I have there interrogated you. (Question 33 repeated to the witness.)

A. I ignored the presence of Mr. Rice, and did not take cognizance of the interview between the two gentlemen.

Q. 35. Then you testify, do you, that you did not hear what I said to you, as set forth in the 33d question? (Question read to witness.)

Objected to as assuming that Mr. Todd said something to witness, of which there is no proof whatever.

A. I cannot say what you said in Mr. Rice's presence and the compulsory manner of the introduction. I did not wish to be introduced to this gentleman.

Q. 36. Did you not mention at some time that the fire-place heater which the defendants are seeking to have produced was in the place, 242 Water street, but had been broken up? If so, state who so informed you, and when it was so broken up, and why it was so broken up.

A. Hearsay; I have no idea who informed me; I have not any idea, I am sure, for it was only hearsay. I don't know why it was broken up, if it was broken up; probably because I had ordered them to sell all the old, useless iron. I have no idea when it was broken up; I don't know there was such a thing in existence.

Adjourned to Friday, January 16th, 1880, at 12 m.

Examination of Mr. Grey is adjourned over to same hour and day.

367 JANUARY 16TH, 1880.

Met pursuant to adjournment.

Present: Counsel for the respective parties.

Examination of ELIZA M. SHEPHARD continued:

Q. 37. When did you give directions to have any stoves or fireplace heaters broken up?

A. Never.

Q. 38. Do you believe that any have been broken up since the death of your brother?

A. Possibly, as I told them to sell any old iron that took up too much room.

Q. 39. When did you so tell them?

A. I can't say any definite period; when my foundryman called for some old iron.

Q. 40. Who did you tell to sell off any old iron that took up too much room, as you state?

A. I can't recall who; probably the clerk; possibly the porter.

Q. 41. Has not Michael Hassen been the porter since the death of your brother in May, 1876?

A. He has acted in that capacity.

Q. 42. Has there been any other porter there but him during that time?

A. I think not.

Q. 43. Is not Mr. Wm. M. Gray, the clerk, at present in charge of the establishment for you?

A. He is.

Q. 44. What clerk or clerks have had charge of the establishment for you prior to Mr. Gray and from the time of the death of your brother?

A. No clerk had charge of the establishment.

Q. 45. I mean what persons occupied the position that Mr. Gray occupies prior to Mr. Gray's going into your employ?

A. A man by the name of Brennan.

Q. 46. Was there any other party prior to Mr. Brennan since the date of your brother's death and prior to the engagement of Mr. Gray as clerk?

A. My brother left two young men. I don't know the length of time they remained there. As early as possible I made a change. I think Brennan succeeded them.

368 Q. 47. Was Brennan there at the time Mr. Gray was employed as clerk?

A. He was not.

Q. 48. Who was clerk just prior to Gray's being employed?

A. I had no one in the capacity of clerk between Mr. Gray and Mr. Brennan.

Q. 49. Was there no one there in charge except Michael Hassen—that is, during that interval?

A. I had a manager for a brief interval.

Q. 50. Give the name of that manager.

A. A gentleman by the name of Shannon.

Q. 51. Give Mr. Shannon's full name.

A. I don't know that I can; J. B. Shannon.

Q. 52. Where is his residence or business address?

A. I have known, but I don't recall; I think Wall St., N. Y. City; I don't know his business.

Q. 53. About how long was he employed for you as manager, and in what year?

A. A brief interval, about a couple of months in 1879.

Q. 54. How long has Wm. M. Gray been employed as clerk?

A. But a short time; I have forgotten the date of his coming in—a few months.

Q. 55. Give Brennan's full name and residence or business address.

A. I think his name is Charles F.; I do not know his residence or business address.

Q. 56. Are you prepared to testify that you told any of these persons, whom you have named, to sell any old fire-place heaters as old iron?

A. I am prepared.

Q. 57. Do you so testify?

A. Yes.

Q. 58. Which of these persons mentioned by you were told by you to sell any old fire-place heaters that took up too much room?

A. None of them.

Q. 59. Then what do you mean by saying that you are prepared to testify, and do testify, that you told some of these persons to sell any old fire-place heaters as old iron?

A. I have not testified to any such thing.

Q. 60. Then you do not mean to testify that you told any one of these persons to sell any old fire-place heaters as old iron?

A. I do not.

369 Q. 61. Do you believe, then, that any of such persons sold or otherwise disposed of any old fire-place heaters which were in the establishment at the time when your brother died?

Objected to as calling for the witness' belief and not for her knowledge.

A. To my knowledge, they did not.

Q. 62. Do you believe that they broke up any such fire-place heaters?

A. I havn't any belief in the matter.

Q. 63. Do you believe that such was done unless you ordered it done?

A. It might or it might not have been done without my sanction.

Q. 64. Last question repeated.

A. Possibly it might have been.

Q. 65. Question repeated.

A. I believe that I have faithful employees, and that they would have done nothing against my interests.

Q. 66. Did you ever order any of these old fire-place heaters to be broken up?

A. I never did.

Q. 67. Then you cannot testify that the old fire-place heater the defendants require — produced in testimony in this case is not in that establishment, 242 Water St., can you?

A. I cannot testify that it is or that it is not.

Q. 68. And you refuse the defendants and their counsel permission to see whether it is there or not, do you?

A. I do, unless obliged by some law of the land.

Q. 69. Do you feel that you are interested against the defendants in this case?

A. Neither for nor against.

Q. 70. Then why do you wish to deprive them of the use of this fire-place heater as testimony in this suit, in case it still remains in the establishment, 242 Water street?

A. At an early stage of this examination I think I gave reply that they approached me unhandsomely; now I answer to it, that they didn't entertain my proposition.

Q. 71. Since you testified that you did not hear what I stated to you about the impracticability of your proposition, and as I
370 now state to you that such a plan as you proposed is impracticable, do you still object to the defendants having the benefit of this testimony desired of this old fire-place heater, the defendants being willing to save you harmless as to expenses, and willing to return the heater to your possession, and to consider it in your possession while in the hands of the examiner of the court?

Objected to on the ground that the question does not call for any test'y relative to any issue in this case, and that the direct examination of the witness is not the proper place for discussion of her reasons for doing or not doing certain things or for propositions or negotiations relative to things to be done in the future.

A. I do; as their counsel had said that he thought, as the defendants were moneyed men, that there was no reason why they should not entertain my proposition in regard to purchase of entire stock at $20,000.

Q. 72. Since you stated at the commencement of your deposition that I had not replied to your proposition and I afterwards stated that I did, in the presence of Mr. Rice, which you do not admit I said to you, how can you now testify that I acquiesced in such proposition as being a fair one; did I not state to you, on the contrary, in the presence of one of my clerks and another gentleman who sat opposite to him, that your suggestion to make a proposition was a fair and reasonable one and that, if you desired it, I would convey a proposition to them for them to obtain possession of such old fire-place heater?

A. Nothing of the kind was said as suggested by the latter part of the question, but, at an aside interview previous to the matter referred to (I am speaking in regard to the interview prior to the interview of Mr. Rice that he refers to), the counsel for defendants had said, as some were for and some against it—against the suit I take it—he did not submit it, my proposition.

371 Q. 73. No matter how you understand it. But, now, considering it, the proposition you made, impracticable and not entertainable, do you still decline to permit the defendants to have access to this fire-place heater to prove its general construction?

Objected to as assuming that the witness has stated that such a fire-place heater exists, the fact being that she has testified that she knows nothing of such article.

Defendants' counsel denies that the witness has stated as is set forth in the objection of complainants' counsel.

A. I do, unless obliged by some law of the land.

Q. 74. Do you, even though your expenses are paid of so producing it or causing it to be so viewed?

Objected to on the ground that it still assumes that the witness has and had control of such a heater.

A. I do.

Q. 75. If the patterns of such fire-place heater are also in that establishment do you also decline to produce them for the same reason?

Same objection.

A. I do.

Q. 76. Do you know that such fire-place heater is not in the establishment, No. 242 Water street?

A. I do not know that it is not; I do not know that it is.

Q. 77. Same question as to the pattern.

A. I do not; I give the same answer as to previous question.

Q. 78. Is not John M. Thatcher's place of business (I refer to the gentleman who is now present at your right hand) next door to your establishment, No. 242 Water street?

372 A. I don't know about the neighborhood; a picture I have at home has the sign of J. H. Burtis; in the store facing to right hand is J. H. Burtis; to the left hand, Butler. I am mistaken; it is to the left hand J. H. Burtis and to the right hand Butler.

Q. 79. When was that picture obtained by you or brought to the house?

A. Many years before my brother's decease one was brought.

Q. 80. How frequently have you been down to your establishment, say, during the past nine months?

A. Frequently.

Q. 81. Question repeated.

A. I couldn't say for my life.

Q. 82. Were you not down as late as one day last week?

A. I was, I think.

Q. 83. The N. Y. City Directory gives John M. Thatcher's place of business as at No. 244 Water street, which is next door to your establishment; have you any reason to believe that the directory is wrong in this respect?

A. Undoubtedly it is right.

Q. 84. It is so stated in the directory as far back as the year in which your brother died; have you any reason to doubt the statements of the directories in this respect?

A. Not at all.

Q. 85. Have you produced the books going to show the sale of these fire-place heaters in your brother's lifetime?

A. I have not.

Q. 86. Did you decline to do so?

A. I do, unless compelled to do so by the law of the land. I don't know that I have any such books.

Q. 87. Do you know that you haven't any such books?

A. I do not know that I haven't.

Q. 88. Do you decline to look and see if you have any such books?

A. I am in the doctor's hands for an affection of the chest, and cannot lift heavy tomes.

Q. 89. Do you decline to have Mr. Gray, your clerk, look for you?

A. I do; his time is so occupied.

Q. 90. Were you not subpœnaed to produce such books?

A. I could not produce what I did not know that I had.

373 Q. 91. Question repeated.

A. I was.

Q. 92. Same question as to fire-place heater and patterns?

A. It was written so badly I could not hardly read it.

Q. 93. Question repeated.

A. The interlineation I did not make out.

Q. 94. As what I have asked you respecting it is not in the interlineation, see if you can answer my 92nd question.

A. I was.

Q. 95. Will you annex that copy of the subpœna to this your deposition?

A. I prefer to keep the copy, and you can copy it if you wish.

Q. 96. I will give you a copy of it.

A. I should prefer the original.

Q. 97. Do you prefer the original; do you decline to have it annexed to this your deposition?

A. I do not.

Witness produces the copy, and the same is marked Def'ts' Exhibit.

I prefer not to give it in evidence until I consult counsel.

Witness retains copy subpœna and now refuses to allow the same to be marked in evidence until she has consulted her counsel.

Q. 98. Will you permit the paper to be annexed to this deposition, you having a true copy of it returned to you at the time of its being so annexed?

A. I prefer to consult counsel.

Q. 99. You have testified that this copy subpœna was written so badly that you could hardly read it; now I wish the court to see whether the copy subpœna you hold was or was not capable of being

read and understood by you; do you therefore decline to produce such copy now in your possession for that purpose?

A. I prefer to consult counsel.

374 Q. 100. Will you testify that you could not read and did not understand the part interlined in that copy subpœna?

A. I did not; I puzzled it out the second time and could not make out what it meant; I don't believe I could read it now.

Q. 101. Will you testify that you did not understand that you were subpœnaed to produce certain books which it is claimed you hold as executrix of the estate of Charles J. Shepherd, deceased?

A. I did not understand so. I did not see the word books in the paper.

Q. 102. Let me look at the copy subpœna which you hold in your hand; it reads, including the interlineation—"and all deeds, evidences, and writings which you have in your custody or power relating to or referring to the sale of such heaters in the lifetime of Charles J. Shepherd, for whom you are executrix."

Now do you decline to produce any writings, papers, books, or other evidences which may be in your possession as such executrix relating to or referring to the sale of fire-place heaters during the lifetime of Charles J. Shepard?

A. I do not know that I have any.

Q. 103. Will you look for such writings, books, papers, or other evidences?

A. I couldn't undertake it in my state of health.

Q. 104. Will you cause Mr. Gray, your clerk, to do so?

A. By doing so I would be obliged to leave my old mother in her 86th year (and take Mr. Gray's place, which I could not fill), whom her physician says may slip out of life any moment, even while sitting in her chair.

Q. 105. Where are the deceased's papers and books?

A. I decline to answer; I don't know that I could answer it, as they are somewhat scattered.

Q. 106. Where are his accounts of sales; would they not be at No. 242 Water street?

A. To the first part of the question I will answer, I do not know; to the latter half of the question, they might or they might not be.

Q. 107. Do you decline either to look for them or to permit your clerk to look for them?

A. I decline, unless authorized by law.

375 Q. 108. Do you mean that the court must order you to do so before you will do so?

A. I did not refer to the court, simply the compulsory part of it; if the law compels me to, to be sure I would, were I able to; if I have them I have no knowledge that I have.

Q. 109. But you will not look or permit your clerk to look even to see if you have them; is not this so?

Objected to as already answered.

A. I already answered that.

Q. 110. Answer it again.

A. My health will not permit; I cannot leave my aged mother.

Q. 111. Do you mean that if you should look and should find them you would not produce such papers and books of account of sales?

A. Unless compelled by law.

Defendants' counsel gives notice to the witness that he will apply to his honor Judge Blatchford, at his chambers in the new post-office and U. S. court buildings, on Saturday, the 17th day of January, 1880, at 12 o'clock noon, for an attachment against the witness for refusing to testify respecting the fire-place heater, patterns, papers, books of account, and other evidence in writing of the late Charles J. Shepherd, and for refusing to produce the same at her examination in this case, and that such application will be made on the *subpœna duces tecum*, the testimony, and other papers and proceedings in this case.

The examination of the witness and the other witness subpœnaed is further adjourned to Saturday, January 17th inst., at 1 o'clock in the afternoon.

Notice is also hereby given to complainants' counsel, now present, of the said application.

376 NEW YORK, *Jan.* 19, 1880.

Met pursuant to adjournment.

Present: Counsel for the respective parties.

Q. 112. Have you looked and examined since you were last subpœnaed through the establishment No. 242 Water street to see if you could find an old fire-place heater or Saracenic parlor grate, so called, having in its construction a top-feed magazine or reservoir, and also flues or other extended heating surface at the rear of such heater and connected therewith, and have you found such a fire-place heater?

A. I decline to answer the question as it is asked.

Q. 113. Why do you decline to answer the question?

A. Because of having received a second subpœna at a late hour of the same morning, for which a previous subpœna had been called, and the fee objected to as the one fee of the previous subpœna was said by Mr. Todd to be sufficient for the day subpœnaed.

Q. 114. Have you examined since our last meeting the several floors of the establishment of No. 242 Water street, N. Y. city, to see if you could find an old fire-place heater or Saracenic parlor grate, so called, or heater having in its construction a top-feed magazine, and also flues or other extended heating surface at the rear of such heater and connected therewith?

A. I have done so since having had read to me by Mr. Todd the second subpœna for to-day.

Q. 115. Did you succeed in finding such an old fire-place heater as I have referred to?

A. I did not.

Q. 116. Was such search a thorough and exhaustive one?

A. I didn't look into the rat-holes, nor some big iron kettles that were there; I looked thoroughly.

Q. 117. Same questions repeated as to the patterns for said fire-place heater (questions 114 to 116, both inclusive), and witness asked if she makes the same answer as to the patterns.

A. I made the same search for the patterns and did not succeed in finding them.

377 Q. 118. Did your brother in his lifetime send over to his or your residence a lot of old patterns as waste wood or material?

A. He did.

Q. 119. Were they destroyed or preserved?

A. Mainly destroyed—they were used for fire-wood; a few bits were given to an artist lady.

Q. 120. Have you looked for the books of account of your brother or of any firm with which he was connected running over the years 1840 to 1846, inclusive, and have you been successful in finding them?

A. To the first part of the question, I have; to the second part of the question, I have not.

Q. 121. Did you look in such places where such books, if they existed, would naturally be found, and was such search a diligent one?

A. I think I did, and I think it was diligent.

Q. 122. Were you shown the circular "Def'ts' Exhibit Brown No. 3" and your attention called to the illustration thereon above the words "Saracenic parlor grate, for dining-rooms, etc.," this morning before you made the examination of the establishment No. 242 Water street for the old fire-place heater and its patterns?

A. It was subsequently to the interpolated subpœna.

Q. 123. Were you shown such illustration before you made such search and your attention called thereto by me as its representing the old fire-place heater the defendants are in search of?

A. The same answer as to previous question.

Q. 124. Were you not also shown a model marked Def'ts' Exhibit Brown No. 2, before you made a full and final examination of such premises?

A. I was shown a model of a fire-place heater made by Andrew Brown.

Q. 125. Did I not also request of you to see if there was such a heater in that establishment, No. 242 Water street, when you made your search, as that model, Def'ts' Exhibit Brown No. 2, represents?

A. I do not recollect the request, but supposed that to be what I was in search of.

Q. 126. You stated, on your calling this morning, and
378 before your examination of the establishment No. 242 Water street, that you had found among Mr. Shepard's papers a patent for a design of fire-place heater. Is that the patent dated February 4th, 1862, and numbered 1523?

A. It is.

Q. 127. Do you believe that represents what you have heretofore referred to in your testimony as the syphonic heater, one of which you have testified you saw on the ground or store floor of the establishment, No. 242 Water street?

A. I do, but may be mistaken.

Q. 128. Did the fire-place heater which you saw on the store floor the other day, as you have testified, resemble that shown in drawing of this design patent No. 1523?

A. I think it did.

Q. 129 Do you decline to have any other search made of the establishment, No. 242 Water street, N. Y., for this fire-place heater and its patterns than that which you yourself have made since the last examination, as testified here to-day?

A. I think the investigation already made is sufficient. I do decline, thinking the one already made sufficient.

Cross-examination by W H. L. LEE, Esq., counsel for plaintiffs:

X Q. 130. Do you know any of the plaintiffs?

A. I am not acquainted, to my knowledge, with any of the parties to this suit (the parties plaintiff having been all mentioned to the witness by counsel, witness adds). I know none of these parties to my knowledge. Since my examination commenced I have met Mr. Thatcher in this room. I never met him before that, to my knowledge. I have a vague, flitting remembrance of once having seen Mr. Thatcher come into the store, but I am not sure it was he.

ELIZA M. SHEPHERD.

379 Counsel for defendants gives notice that he offers in evidence letters patent of the United States granted to Eliphalet Nott October 24, 1832, for a fire-place stove, a certified copy of which he agrees to produce as soon as received, to be marked as Defendants' Exhibit No. 19.

Also English letters patent granted to Richard Coad and John Beers Coad November 13th, 1852, and numbered 738, which he agrees to produce a certified copy of, to be marked, as soon as received, as Defendants' Exhibit No. 20.

Also letters patent granted to Charles J. Shephard, No. 1523, for a design for fire-place heater, dated February 4th, 1862, certified copy to be produced as Defendants' Exhibit No. 21.

Counsel for complainants objects to the introduction of these three patents as evidence, because the same are not mentioned in the answer, and also because counsel for defendants does not produce the same for inspection.

At the request of complainants' counsel it is certified that the three patents above referred to are not produced, nor is any copy thereof produced.

Counsel for complainants insists on their production before the same are offered in evidence.

Defendants' counsel states that he will annex his exhibits, the certified copies [of] Nott and Shepard patents, as soon as they are received from the Patent Office, to-morrow or next day; also a certified copy of the specification and drawing of the Coad English patent (blue book) as soon as received from the United States Patent Office.

Adjourned till January 20th, 1880, at 12 m.

NEW YORK, *Jan'y* 21, 1880.

Met pursuant to adjournment.

Present: Counsel for the respective parties.

380 CHARLES C. C. RICE, being produced and duly sworn as a witness on behalf of the defendants, testifies as follows:

Q. 1. What is your name, age, residence and occupation?

A. My name is Charles C. C. Rice; age, 34 years; reside in Brooklyn, N. Y.; am employed by the J. L. Mott Iron Works.

Q. 2. Were you acquainted with Charles J. Shephard in his lifetime?

A. I was.

Q. 3. Where did said Shepard do business in his lifetime?

A. The only place that I know of personally was No. 242 Water street, New York city.

Q. 4. Did you ever see, in that establishment, prior to the decease of said Shepard, an old fire-place heater to which your attention was called by said Shepard?

A. Yes, sir.

Q. 5. When and under what circumstances did you see said old fire-place heater?

A. As near as I can remember, some time during the year 1869 a gentleman by the name of S. B. Sexton called at my place of business, No. 206 Water street, and notified the firm in which I was a partner, which firm was known as Burtis & Rice, that he thought that we were using certain inventions in fire-place heaters which infringed his rights; this notice was a verbal one. In consequence of that conversation, Mr. Shepard and I being very familiar—he usually spent from one to two hours every day in my store—a conversation turned on to this question. In consequence of that conversation Mr. Shepard invited me to his store; there he showed me a fire-place heater which embraced, in my opinion, the essential points claimed by Mr. Sexton.

Q. 6. Please describe the old fire-place heater he then showed you—that is, its essential elements or features.

A. It was a heater about two feet and four inches wide, about two feet deep, and about two feet four inches high, with a frame about the centre of it, a feed directly in the front of the frame on the top; there was certain flues—I think two flues—running into a cross-flue in the rear; the feed or lid in the front fed the fuel into a reservoir;

381 I think that reservoir was lined with brick at the time I saw it; the upper section was recessed back in the front part of the main body of the heater; there was also a line of mica windows at about the line of the top of the combustion chamber proper, or fire-box, extending downward, say, three to five inches.

Counsel for complainants seasonably objects to the examination of this witness and all questions and answers showing or relating to any prior knowledge on the part of this witness for the reason that he is not named in the answer

Q. 7. Please look at the circular now shown you, marked Defendants' Exhibit Brown No. 3, and state if you find any illustration of the old fire-place heater which you then saw.

A. I see a cut or illustration marked "Saracenic parlor grate for dining rooms," &c. This cut, with the exception of an urn placed in the centre of the top and in the front of the frame, which is shown on the cut, also the particular form of the frame, so far as its outside lines, conforms *so far as* — the front of the cut I have now before me from this cut I cannot judge what the peculiar construction might have been; I mean to state that I cannot state what that construction of that Saracenic grate might have been, as shown by that cut.

Q. 8. To what part of the construction in that illustration do you refer to as not being shown. State specifically.

Objected to, as the witness has already stated that he could not tell its construction without mentioning any specific part.

A. From this cut, called Saracenic parlor grate, &c., I recognize that which is shown to be about a *fac simile* of the heater Mr. Shepard showed me, with the exceptions I have already stated. I can't answer that question from that cut.

382 Q. 9. Is there shown on that illustration the flues at the rear of the fire-place heater?

Objected to on the ground that the cut speaks for itself, and erroneously assuming that the cut represents a fire-place heater.

A. This cut is a dead flat front view of the article, therefore it is impossible to tell what the construction is of that portion which may be in the rear of the frame as shown on this cut.

Q. 10. You say, in your 6th answer, there were two flues running into a cross-flue in the rear. For what purpose were such flues at the rear of said fire-place heater?

Same objection.

A. I judged they were placed there to increase the radiating surface; also, to cause the combustion to go through a longer passage before escaping to the chimney, thereby more fully utilizing the products of fuel consumed.

Q. 11. Did you learn from Mr. Shepard at that time during what length of time he had made and sold said fire-place heaters? If so, state it.

Objected to as calling for hearsay evidence, and as assuming that the articles referred to were fire-place heaters.

A. I understood from him at that time that he had made and sold heaters similar to that many years previous; in fact, that the manufacture and sale had ceased.

Q. 12. Did he say how many years previous?

Same objection.

A. I don't remember that he stated a specific number of years.

383 Q. 13. Did he then tell you where there could be seen any of such fire-place heaters then in use?

Same objection.

A. He told me at one interview—I cannot state if it was on the same day that I saw said heater or not—but in one conversation about that time he stated that there was still one of those old heaters in practical use. I cannot give the street or number, but my best impression is that it was in Bank or Jane street, in the vicinity of Abingdon square.

Q. 14. Did you learn from him whether he had placed only a few or a great many of said fire-place heaters in actual use?

Same objection.

A. He gave me the impression that he had made and sold many of them.

Q. 15. Did he tell you for what length of time the manufacture and sale of said fire-place heaters had ceased?

Same objection.

A. He showed me this old heater more as a curiosity. I should say from the impression he gave me that it must have been years between the time I saw this heater and the time he ceased to make them.

Answer to this and to question 14 objected to by complainants' counsel because the witness states his impressions and not facts.

Q. 16. State what he said to you in the year 1869 as to the time which had elapsed since he had made and sold similar fire-place heaters.

Same objection, and also because the question assumes such statement to have been made in 1869.

384 A. I don't think that he ever stated the time; he rather ridiculed the idea of the claims which were being agitated by Mr. Sexton at that time with regard to the top feed in fire-place heaters, in consequence of which he showed me this old heater, which I judged must have been made many years previous to 1869.

Same objection as to previous answer.

Q. 17. About how old did it look to be?

A. I could not judge on that point, but in shape I do not think it would compare with style of ornamentation and weight in which heaters were being made at that date.

Q. 18. Had this heater which you then saw the shape and style of ornamentation shown in the illustration "Saracenic parlor grate for dining rooms," &c., on Defendant's Exhibit Brown No. 3?

(Objected to as already answered.)

A. The shape I recognize so far as what this cut shows, with the exceptions I have already stated.

Q. 19. For what length of time have stove and fire-place heaters of the style and shape and ornamentation as illustrated by this circular, Defendant's Exhibit Brown 3, been out of the market, so far as you know.

Objected to as irrelevant and incompetent.

A. So far as what is termed on this circular Saracenic parlor grate I never saw one in practical use. I have seen what is called a "Saracenic stove (on this circular) without radiators for halls of dwellings," &c., in use within the last year. I do not remember of ever having seen any other stove on this exhibit in actual use, but have seen some stoves which are here illustrated at 242 Water street.

Q. 20. I have reference to such style of stoves and fire-place heaters having been on the market within the time you have been connected with the trade?

Same objection.

385 A. In general points of construction heaters that have been made since I have had any knowledge of the stove trade embody about the same ideas as the old heater which I referred to. I would state that I refer to heaters such as are known to the trade as self-feeding heaters.

Q. 21. I mean the style of ornamentation and square or oblong shape of parts in the castings. How long has such styles and shapes of parts been out of the market?

Same objection.

A. So far as ornamentation —, as a rule, every manufacturer suits his own taste; since I have been in the stove trade the style of mantels most used have been made with a circular opening; consequently manufacturers changed from the square or oblong form to a circular form, as being more convenient.

Q. 22. How long have you been connected with the stove trade?
A. Since 1864.

Adjourned to January 22nd, 1880, at 3 p. m.

NEW YORK, *January* 23*d*, 1880.

Met pursuant to adjournment.

Cross-examination by W. H. L. LEE, Esq., counsel for complainants:

X Q. 23. Do you come here because you have been subpœnaed
A. Yes, sir.
X Q. 24. Have you brought your subpœna with you?
A. No, sir.
X Q. 25. What witness fees have you received?
A. None.

X Q. 26. Were you not directed by Mr. Mott to testify as a witness in this case?

A. No, sir.

X Q. 27. With whom have you consulted concerning this case before your examination began?

A. No one specially, as I know of.

386 X Q. 28. What do you mean by the expression "no one specially?"

A. I mean that I have no especial interest in the case, therefore have not had any occasion to consult with any one.

CHAS. C. C. RICE.

Sworn to before me Janu. 21st, 1880.

JOHN A. SHIELDS, *Examiner.*

NEW YORK, *January 26th*, 1880—11 a. m.

Met pursuant to adjournment.

Present: Counsel for defendants and the witness, Michael Hassen, in obedience to the subpœna served on him on the 24th day of January, 1880; and the examination, at the request of the witness and counsel, is adjourned to the 27th day of January, at 11 o'clock a. m.

NEW YORK, *January 27th*, 1880.

Met pursuant to adjournment.

Present: Defendants' counsel.

The witness not being present, examination at the request of counsel for defendants was further adjourned to the 29th day of January, at 11 o'clock a. m.

NEW YORK, *January 29th*, 1880—11 o'clock a. m.

Met pursuant to adjournment and adjournment taken until 2 p. m

387 JANUARY 29TH—2 o'clock p. m.

Met pursuant to adjournment.

Present: Counsel for the respective parties.

MICHAEL HASSEN, being produced and duly sworn, deposes and says:

Q. 1. What is your name, age, residence, and occupation?

A. My name is Michael Hassen; age, 52 years; reside-, No. 195 Mulberry St., N. Y. city; I am a porter and employed by Shephard & Co., of No. 242 Water street, N. Y. city.

Q. 2. How long have you been employed as porter for Shephard & Co.?

A. Since 1851.

Q. 3. Do you know of an old fire-place heater being in that establishment having in its construction a top-feed magazine and flues or other extended heating surface at its rear and connected therewith; if so, how long has such old heater been in that establishment?

Objected to as leading.

A. Yes, sir; I know of its being there over twenty years, and for how much longer I cannot say; it was there when I first went there to work.

Q. 4. Were there other heaters like it in use when you first went there to work?

A. They were in use in different places; I could not now state just the places; I got repairs out frequently for them; they were in use in the city of New York.

Q. 5. Please look at the sketch now shown you, and state whether that represents this old fire-place heater and those like it in use twenty-five years ago, as made and sold by Shephard & Co.?

Objected to as leading.

388 A. Yes; but it had three pipes behind, two hot-air pipes and one smoke-pipe; the front is like it, but it is a poor sketch.

Sketch put in evidence and marked "Exhibit Hassen" for identification.

Q. 6. Where is the old fire-place heater referred to in your third answer now?

A. It must be at 242 Water street, some place down in the shop.

Q. 7. When did you see it there last?

A. I have not seen it together in years, but when I am looking for things sometimes I come across the patterns or plates and put them away.

Q. 8. Did you take this old fire-place heater apart?

A. The iron patterns of one are there.

Q. 9. Do you think you can find such iron patterns?

A. I am most positive they are there.

Q. 10. Do you think you could put such patterns together if you found them—I mean the iron patterns from which the old fire-place heater was made?

A. I think I could, if I found them.

Q. 11. Will you look for these patterns?

A. If I only got authority to do it, I would; if I only get an order from Miss Eliza M. Shephard, I would.

Q. 12. Do you decline to look for these old patterns, unless directed to do so by Eliza M. Shephard?

A. Yes, sir; unless I get authority from her.

Q. 13. I now request you to look for such iron patterns, and, if necessary, to get permission or ask permission of Miss Shephard to do so.

Defendants' counsel offers to permit complainants' counsel to cross-examine the witness before this search is made, if complainants' counsel so desires.

Q. 14. In referring to the old fire-place heater being in that establishment, 242 Water street, do you refer to the iron patterns for such heater?

Objected to as leading.

389 A. Yes.

Q. 15. Question 13 reput to the witness.

A. I have got to get that first, then I will look for them.

Complainants' counsel declines to cross-examine the witness until his direct examination is concluded.

Defendants' counsel directs the witness to either make the search for said iron patterns or to first apply to Miss E. M. Shephard for leave to do so, and the examination, in order to enable the witness to do so, will be adjourned, after the putting of one more question on the direct, to Friday, January 30th, at 2 o'clock in the afternoon.

Q. 16. Would Miss Eliza M. Shephard herself be able to find these patterns, were she to search for them alone?

A. No, sir; she would not know them if she seen them in the store.

Examination of this witness adjourned to Friday, January 30th, 2 p. m.

JANUARY 30TH—2 p. m.

Met pursuant to adjournment.

Present: Counsel for both parties.

After waiting until half-past three p. m., and the witness not appearing, and defendants not being ready to proceed, the further examination is adjourned to Saturday, January 31st, at 10 o'clock a. m.

390 JANUARY 31ST, 1880—10 a. m.

Met pursuant to adjournment.

Present: Counsel for both parties.

The witness, Michael Hassen, being present, counsel for the complainants requests that the taking of testimony be proceeded with, as he consented to an extension of time to take the testimony of the witness Liddle under the express understanding that the testimony of the witness Hassen would be taken to-day.

Defendants' counsel states that the witness Hassen has just said, in the presence of counsel, that he is physically unable to go to Miss Shepard to-day, but promises to do so Monday morning, make the search for the patterns immediately following, and then give his testimony the same day.

Defendants' counsel further says that he made the effort yesterday to again subpœna Miss Shepherd in order to get her permission for Hassen to search, but found her confined to the house by illness. Defendants' counsel therefore requests complainants' counsel to concur in an adjournment of the further examination of this witness to Monday, February 2nd, at one o'clock p. m.

Counsel for complainants calls attention to the fact that the defendants have had since Dec. 18th, 1876, in which to take their testimony, and that notwithstanding the opposition of complainants the court has several times extended the defendants' time to take testimony; that after a delay of about 18 months, and notwith-

391 standing repeated requests by the complainants' counsel to the defendants to proceed, and no testimony having been taken by

defendants during that interval, the court, on Nov. 24, 1879, extended defendants' time for twenty days, which, by consent of counsel, and by order of court, on Jan. 24, 1880, has been extended successively to the present time. Since Nov. 24, 1879, the defendants have had ample opportunity to take testimony, and nowithstanding that fact have examined but few witnesses. This cause has been reached in its order on the equity calendar several weeks ago, and but for the very unreasonable delay on defendants' part in taking testimony might have been heard and probably decided at the present time. Whatever the result of this suit, this delay is working great injury to complainants, for the reasons complainants' counsel is unwilling to formally extend defendants' time to take testimony, but if the witness Hassen appears on Monday, Feb. 2nd, at one o'clock p. m., he will not object to the further testimony of said Hassen being taken.

Adjourned to Monday, February 2nd, 1880, at one o'clock p. m.

MONDAY, *Feb.* 2, 1880.

Examination of the witness Hassen further adjourned to Tuesday, February 3rd, at one o'clock p. m.

392 NEW YORK, *Feb.* 3, 1880.

Met pursuant to adjournment.

Present: The witness Hassen; and examination of witness is further adjourned until Wednesday, Feb. 4th, at nine o'clock, at the request of the witness.

NEW YORK, *Feb.* 4, 1880.

Met pursuant to adjournment.

This witness Hassen failing to appear, an adjournment is taken to Thursday, February 5th, 1880, at 11 a. m.

FEB. 5, 1880.

The witness Hassen not appearing, the examination is adjourned to Feb. 6, 11 a. m.

FEB. 6, 1880—11 a. m.

Met pursuant to adjournment.

The witness Hassen not appearing, an adjournment is taken till Feb. 7, at 11 a. m.

FEB. 7, 1880.

The witness Hassen not appearing, an adjournment is taken till Feb. 9, at 11 a. m.

393 FEB. 9, 1880.

Met pursuant to adjournment.

The witness Hassen not appearing, adjourned to Feb. 10, at 11 a. m.

FEB. 10, 1880.

Met pursuant to adjournment.

Adjourned to Feb. 11, at 11 o'clock a. m.

NEW YORK, *Feb.* 11, 1880.

Met pursuant to adjournment.

The witness Hassen appears and requests that his examination be adjourned to Thursday, 12th inst., at 11 o'clock, as he is to-day too ill to undergo further examination.

NEW YORK, *Feb.* 12, 1880—11 a. m.

Met pursuant to adjournment, at request of witness Hassen.

The witness Hassen being present, and counsel for respective parties, namely, W. H. L. Lee, Esq., for plaintiffs, and A. J. Todd, Esq., for defendants.

Counsel for complainants desires to state that the defendants' time to take testimony has expired several days ago, and that complainants do not agree to extend defendants' time to take testimony any further.

394 Objection is, therefore, made to the examination of this witness, unless the complainants' time to take testimony is extended to March 1, 1880, and unless the said witness is examined from day to day until the same is concluded, with sessions of reasonable length each day, and unless the examination is so conducted as not unnecessarily to prolong the same.

Counsel for defendants hereby extends complainants' time to take testimony to and including March 1st, 1880.

Q. 17. Have you been able since the 30th of January last to go over to the city of Brooklyn, in order to request permission of Miss Shepherd to look for the iron patterns at 242 Water street, which have been referred to in your testimony?

A. It is five weeks next Tuesday since I was able to go over or able to go to work.

Q. 18. Do you feel able to go to her residence in Brooklyn to-day and see her about it?

A. No, sir; I am not; not to-day; no, sir.

Q. 19. Have you heard whether Miss Shepherd is able to be seen or interviewed about the matter at present?

Objected to as hearsay and incompetent.

A. Yes, sir; I have heard so.

Q. 20. What did you hear, and who told you so?

The same objection.

A. My own son told me that she was sick in bed; my son works in my place in her shop since I am sick.

Q. 21. Did you also hear that she was not even able to have an interview with her book-keeper?

The same objection.

A. Yes, sir; the same party, my son, told me.

395 Q. 22. What did your son tell you about the book-keeper not being able to communicate with Miss Shepherd?

The same objection.

A. Because she is sick abed.

Q. 23. For how many days past did he say the book-keeper had not been able to communicate with her?

The same objection.

A. He didn't say no length of time at all; he didn't say how long it was.

Q. 24. Do you think you will be able to go there to-morrow morning and see Miss Shepherd, and make the request heretofore called for in your direct examination?

Objected to as irrelevant.

A. No, sir; I will not be able to go.

Q. 25. Will you by Saturday morning?

The same objection.

A. I don't know.

Q. 26. Will you do so by that time if you feel better than you do to-day?

The same objection.

A. I don't know.

Q. 27. Will you make the effort to so?

A. I will try to.

Defendants' counsel requests the postponement of the examination to Saturday, Feb. 14th, 1880, at 12 o'clock noon.

Complainants' counsel desires to cross-examine the witness on his testimony already taken.

Defendants' counsel does not object.

396 Cross-examined by WM. H. L. LEE, Esq., *de bene esse:*

Defendants' counsel insists upon the cross-examination being unconditionally.

X Q. 28. Where were you born?

A. Ireland.

X Q. 29. When and at what age did you come to this country?

A. I couldn't say.

X Q. 30. Were you grown up at the time?

A. Yes.

X Q. 31. How many years had you been grown up?

A. I couldn't say that.

X Q. 32. Tell me as nearly as you can.

A. Probably in the neighborhood of twenty.

X Q. 33. Do you mean that you were twenty years of age when you came to this country or that you had been grown up twenty years when you came here?

A. I was in the neighborhood of twenty years old; it may be a little less or a little over.

X Q. 34. Do you not know what year you came over?

A. I don't recollect.

X Q. 35. State as nearly as you can.

A. I couldn't say.

X Q. 36. Was it as late as the year 1855?

A. I don't know.

X Q. 37. Was it as late as the year 1860?

A. No, sir.

X Q. 38. How many years before 1860 was it, to your best knowledge?

A. I don't know.

X Q. 39. You have already sworn to what your age is; how do you know that?

A. I guessed it as near as I could think.

X Q. 40. You have already sworn how long you were employed as porter for Shepherd & Co.; how did you know that?

A. Because I see the date of the year on the book—1851.

X Q. 41. Whose books were these?

397 A. I have seen it on our old pay-roll in the safe.

[X Q. 42.] (Question repeated.)

A. C. J. Shepard's.

X Q. 43. Is your knowledge on the subject derived from any other source except from this pay-roll? And, if so, state the same fully and at large.

A. To the best of my knowledge I had it in my own head—1851.

X Q. 44. You have just sworn that you did not know whether you came to this country as late as the year 1855, and you now swear that you had it in your head that you were employed by Shepard & Co. in 1851; will you be kind enough to explain this discrepancy, if you can?

A. I misunderstood him in the question; I understood him to ask me between 1860; I didn't think of 1851 being between 1855 at the time; I could easily have told that.

X Q. 45. State what business or employment you had been engaged in before you came to this country.

A. A laborer.

X Q. 46. What did you do?

A. Worked on a farm.

X Q. 47. What did you do in this country after your arrival here and before you were employed by Shepard & Co.?

A. I tended masons a little while.

X Q. 48. Anything else?

A. No, sir.

X Q. 49. Do I correctly understand that from the time you went into the employ of Shepard & Co. until the present time you have always been a porter?

A. No, sir.

X Q. 50. State what is the fact.

A. The fact is, when I went there I was sent upstairs to help.

X Q. 51. What did you do?

A. I done several things.

398 X Q. 52. Have you any objection to letting the court know what you did?

A. I helped in the blacksmith shop; I helped in the tin shop, and I went out as a helper, too.

X Q. 53. When did you become porter?

A. I couldn't say the year; it is over twenty-five, I know.

X Q. 54. And you have been porter continuously ever since?

A. Yes, sir.

X Q. 55. Please state how often you have attended at this office for the purpose of being examined as a witness in this case?

A. Three times, I think.

X Q. 56. Have you not been subpœnaed several times when you did not appear?

A. No, sir; only but one subpœna.

X Q. 57. You were examined here on the 29th day of January, 1880. Do you mean to say that was the first time you appeared at this office for the purpose of being examined?

A. Yes, sir; I got a subpœna, and I came the next day.

X Q. 58. Do you mean to say that you were not subpœnaed until January 28th, 1880, the day before you were first examined?

A. The night before I was first examined.

X Q. 59. What is the nature of the illness from which you say you have been suffering for the last month?

A. A bad cold and a bilious attack.

X Q. 60. Has there been nothing else the matter with you?

A. I have been bodily sick all through along that.

X Q. 61. (Question repeated.)

A. Nothing to my knowledge.

X Q. 62. Do you mean to swear on your oath that one of the reasons why you have not been able to see Miss Shepard and attend to the matter referred to in this examination has not been frequent intoxication?

399 A. No, sir; nothing to do me any harm; I had to take some for the cold.

X Q. 63. Do you mean to state that during the last month you have not been intoxicated?

A. Not to do me any harm.

X Q. 64. (Question repeated.)

A. Not to do me any harm.

X Q. 65. (Question repeated.)

A. What do you call intoxicated?

X Q. 66. Don't you know the meaning of the word intoxicated?

A. Yes, sir.

X Q. 67. (Question 63 repeated.)

A. To do me no harm; I took it as medicine.

X Q. 68. Question is repeated, and the witness is notified to answer the question, and if he fails to do so he is notified that a motion to attach him for contempt of court will be made.

A. Not to roll in the street or fall down, or be incapable of staying in the house.

X Q. 69. (Question repeated.)

A. Nothing to do me any harm; I knew what I was doing.

X Q. 70. (Question is again repeated.)

A. Not to roll in the street or fall in the street, or be incapable of knowing what I was doing, or to know where I was going.

X Q. 71. But you have frequently been affected by liquor, have you not, so that you could not well perform your duties at Shepard & Co.'s.

A. Not in regard to liquor—sickness.

X Q. 72. During the last month you have taken liquor very freely, have you not?

A. I haven't taken a half gallon of hard liquor in my life.

X Q. 73. (Question repeated.)

A. No, sir; not freely.

X Q. 74. What amount have you daily taken?

A. I didn't measure it.

X Q. 75. State as accurately as you can.

400 A. I don't know.

X Q. 76. What liquors have you taken and in what form?

A. I took a little whiskey and pepper the day I was sick in bed; I took some hot tea and coffee and some bread and butter.

X Q. 77. Is that all you have taken in the way of liquor during the last month?

A. No, sir; I took a few glasses of warm beer to sweat myself.

X Q. 78. Do you mean to say that during the last month, or about two weeks ago, you were not under the influence of liquor for several days to such an extent as to prevent your working?

A. Not in regard of liquor; in regard of bodily sickness.

X Q. 79. Was not the bodily sickness that you referred to caused by excessive use of liquor?

A. No, sir.

The further examination of this witness is suspended.

Counsel for complainants requests that defendants' counsel proceed with the redirect examination of this witness as far as possible at the present time.

Defendants' counsel requests a postponement to Saturday, at 11 o'clock a. m.

Complainants' counsel does not consent to the postponement, nor that the testimony this day taken form a part of the record herein, except on the conditions mentioned before the examination was proceeded with to-day; nor does complainants' counsel consent to any extension of defendants' time to take testimony, which has long since expired.

Adjourned, at the request of defendants' counsel, till Saturday, at 12 o'clock noon.

401 NEW YORK, *February* 14, 1880—12 o'clock m.

Met pursuant to adjournment.

Present: Wm. H. L. Lee, Esq., of counsel for complainants, and A. J. Todd, Esq., of counsel for defendants.

Counsel for defendants desires the examiner's clerk to note on the record that he, the examiner's clerk, had just returned from the

residence of Miss Shepard, in Brooklyn; that he was told at such residence that Miss Shepard was at the present time too sick to communicate with him or with any one respecting this matter.

Counsel therefore requests that the further taking of testimony, so far as this witness and Miss Shepard is concerned, be adjourned over for a few days.

Counsel for complainants objects to the adjournment on the ground that the information sought could have been obtained from her on one of the numerous days when she was present at this office and being examined as a witness.

Counsel for complainants also asks whether the defendants' counsel has taken the very obvious method of writing a note to Miss Shepard, and asking the permission which he says he desires, and the failure to obtain which had been the alleged excuse for so many adjournments.

Defendants' counsel, for reasons, desires the witness Hassen to personally make application for this leave, but that he will
402 send a messenger with a letter to the house of Miss Shepard between now and Monday's session, at the suggestion of complainants' counsel, and therefore requests an adjournment to Monday, at 1 o'clock p. m., as it may be that an answer cannot be obtained to a letter before some time during Monday forenoon.

Counsel for complainants desires to state that the witness, Michael Hassen, some two weeks ago stated in the presence of defendants' counsel that he would not ask Miss Shepard for the desired permission, and has since repeated the same in the presence of defendants' counsel, and that the delay in making any other effort to obtain Miss Shepard's permission has been unreasonable and made with the object of prolonging the case unduly, and therefore the adjournment requested is not consented to.

Counsel, moreover, desires to ask the witness Hassen, who is now present and who has stated he cannot be here on Monday, a few questions.

Defendants' counsel cannot accept the complainants' counsel's statement respecting what the witness said two weeks ago, as the record made two weeks ago is the best evidence of the fact, and it nowhere appears on the record of this witness' examination two weeks ago that he refused to ask Miss Shepherd's permission to examine the premises 242 Water street for these old patterns. On the contrary, it appears from the record that the witness stated that he had to get Miss Shepard's permission first, and that then he would look for them (answers to Q's 11 and 15).

403 Counsel for complainants did not state that the statements of the witness Hassen referred to were made while he was on the witness stand, and with this explanation the statement is repeated.

Cross-examination of witness HASSEN, *de bene esse*, continued:

X Q. 80. Please state whether or not you will ask permission of Miss Shepard to examine the premises 242 Water street for the old patterns referred to in your examination.

A. No, sir.

X Q. 81. Why not?

A. Because I daresn't do it.

X Q. 82. Why don't you dare to do it?

A. For fear I would be discharged.

X Q. 83. Why do you think you would be discharged if you did it?

A. Because I know I would.

X Q. 84. (Question 83 repeated.)

A. Because I daresn't make too free with her.

X Q. 85. Please state whether or not you ever informed Mr. Todd, the defendants' counsel, that you would not ask this permission of Miss Shepard.

Objected to as immaterial, and as defendants' counsel admits that the witness has so talked within the last day or two under some fear, as counsel supposes, but that up to within a day or two appointments *has* been made with the witness to have him accompanied to Miss Shepard's home, and that until to-day the only reason given by the witness in counsel's presence was his inability to go there because of his, the witness', bodily health; that the witness testified on the last day of the examination here (Feb. 12) that it was five weeks next Tuesday since he was able to go over, and that he was
404 not able yet to go over (Q's 17 and 18); that he did not know that he would be able to go to-day (Q. 25), but that he would try to (Q. 27).

Counsel for complainants objects to all of the foregoing statement after the admission as an attempt to prompt the witness under color of an objection, and because statements are made which are not matters of record.

Defendants' counsel has been forced to this course, because the question indirectly makes him a party to a conversation wholly unnecessary, and which the record itself does not bear out, and which counsel desires the attention of the court called to when it is claimed that the defendants are the parties who are delaying the progress of this case.

A. I never did consent to go to ask her permission, but I said if they got permission for me I would do my best to get the pattern if I got an order, and the only excuse I made of inability and sickness was to get out of it.

X Q. 86. (Question repeated).

A. Yes, sir.

X Q. 87. When did you first do so?

These objections continued.

A. I couldn't say; I didn't keep no record of it; I don't know the date.

X Q. 88. State whether or not you so told Mr. Todd the first time you came here to be examined?

The same objections, and as the record is the best evidence of what transpired at previous examinations, and by which the only record the court can be guided in the investigation of the matter now before it.

A. No, sir; I never told him I would go to Miss Shephard's.

405 X Q. 89. State whether or not you told him you would not go when you first came here to be examined?

Objected to as attempting to prove immaterial and desultory conversations in the face of the witness' testimony Thursday last, that he would try to go over to Miss Shepherd's between that time and to-day. (Fol's and answers 24 to 27.)

The above statement of counsel objected to as an attempt to prompt the witness.

Defendants' counsel denies the charge, and states that it was only to them the immateriality of such cross-examination conceding there had been such prior conversations.

A. I never consented to go; I said I would come down if I was able—down here; and I said I wouldn't take a hundred dollars and go over to Brooklyn to see her.

X Q. 90. Did you say this to Mr. Todd when you first came down here?

The same objections.

A. I couldn't say whether it was the first or second time I was down here.

X Q. 91. Did you say that you would not go from the first time Mr. Todd spoke to you on the subject?

The same objections.

A. I didn't say I wouldn't go, but I was putting it off—excusing myself on account of sickness; and then the last day his clerk said he would brace me up and take me over, and that is the time I said I wouldn't take a hundred dollars to go to see her; I never fully consented to go to see her, because I knew it would be no use.

X Q. 92. This time when you said you wouldn't take a hundred dollars was about two weeks ago, was it not?

A. I couldn't say.

406 X Q. 93. You know it was not within two or three days past, do you not?

The same objections.

A. I don't know.

X Q. 94. Was it the last time you were down here?

A. I don't know; I was so many times down here.

X Q. 95. You have said that you knew it would be of no use to see Miss Shepard; why do you think so?

A. Because I knew she wouldn't give her consent.

X Q. 96. Why wouldn't she give her consent?
A. I don't know.
X Q. 97. How do you know that she wouldn't give her consent?
A. I don't know why.
X Q. 98. But you knew she wouldn't?
A. Yes, sir.
X Q. 99. Do you think the fact that she had been subpœnaed by the defendants as a witness several times and has had a motion for attachment noticed against her has had any influence in preventing her from giving her consent?

Objected to as improper, immaterial, and because it does not appear that the witness has knowledge of the matters assumed by the question.

A. No, sir; no influence in her, because if she had never got any subpœna or anything she would never give her consent.
X Q. 100. You have stated that you put off going to see Miss Shepard, excusing yourself on account of sickness; then am I to understand that you might just as well have gone one time as another, but you dare not go at all for fear of offending Miss Shepard?

The same objections as to similar questions heretofore asked.

A. Yes, sir.

407 Redirect:

R. D. Q. 101. If Miss Shepard states that you can search for those patterns either in or out of her presence are you willing to do so?
A. I can never find them.
R. D. Q. 102. That is not the question I ask you; the last question is now repeated.
A. I am willing to do so, but it is useless. I must have an order from her before search.

That part of the answer "but it is useless" objected to as volunteered and not responsive and improper in view of the witness' previous testimony on the direct examination. Counsel for defendants requests that the further examination of this witness be adjourned until after the receipt of Miss Shepard's reply to the message, which it has been proposed to send her, namely, until Monday at 1 o'clock p. m., and defendants' counsel agrees that witness need not attend until he is sent for, especially so as to save unnecessary attendance on the part of the witness; that defendants' counsel understands from the witness nodding his head that this is acceptable to him.

Before consenting to an adjournment counsel for complainants, in view of the testimony thus far given by this witness, asks with what object the further examination is desired; and whether in the event of a refusal by Miss Shepard his examination of the witness is concluded.

As to the first inquiry defendants' counsel says that he desires the witness both to search and testify respecting these old patterns

in case of Miss Shepard giving permission to search. As to
408 the second inquiry counsel says sufficient unto the day is the evil thereof.

Complainants' counsel declines to consent to the adjournment, and requests the examiner to require of the witness to sign his deposition, on the understanding that if the court extends defendants' time to take testimony this witness may be again subpœnaed.

Defendants' counsel respectfully requests an adjournment, as above stated, and denies the right of the examiner to discharge the witness until the party who has called him is through with him, except it is that the court orders his discharge on a proper application to that effect made, when counsel will be content.

Counsel for complainants then requests defendants' counsel to proceed with the examination of this witness.

Defendants' counsel states that it is after 5 o'clock p. m., and that it would appear from the witness' uneasy attitude that the witness himself does not wish to remain, but desires a postponement. Counsel therefore request this postponement be made.

Complainants' counsel, in view of this unreasonable refusal, declines to consent to adjourn, and reserves the right to object to all the testimony taken by defendants since their time to take testimony expired.

Adjourned, at the request of defendants' counsel, to Monday, February 16, 1880, at 1 o'clock p. m.

409 NEW YORK, *February 17th*, 1880.

Present: A. J. Todd, Esq., counsel for defendants, and Wm. H. L. Lee, Esq., of counsel for complainants.

ROBERT Z. LIDDLE, a witness produced on the part of the defendants, being duly sworn, deposes and says:

Q. 1. What is your name, age, residence, and occupation?

A. Robert Z. Liddle; I am 45 years of age; I reside at Albany, N. Y., and am in the stove and furnace business.

Q. 2. Were you acquainted with Charles J. Shepard, now deceased, in his lifetime; if so, for what length of time were you so acquainted with him?

A. I was acquainted with him for about 23 years; intimately acquainted with him from the year 1863 up to the time of his decease.

Q. 3. Where was his place of business?

A. No. 242 Water street, New York city.

Q. 4. Did said Shepard ever call your attention to an old fire-place heater in said establishment?

A. He did.

Q. 5. When and under what circumstances?

A. About the year 1864 or '5, at the time when he had given testimony in the case of Thatcher *v.* Merklee, he invited me to visit his store, and exhibited to me a fire-place heater which was located upon the second floor and near the front of the building.

Q. 6. Please describe that heater.

A. It was substantially rectangular in form, about 2 feet 6 inches in height and width, and about 3 feet in depth; it was made of cast-iron, embodied a fire chamber lined with fire-brick, a grate or fire-bed, a descending flue, which communicated at the rear of the base with two ascending flues, said ascending flues communicating with a horizontal flue at the top, in the centre of which was the exit pipe; it also embodied a magazine for reserved fuel, which was supplied to the same through an opening in the top, which opening was provided with a cover.

410 Q. 7. Did this construction of heater which you so saw contain extra radiating surface—that is, extra heating surface—at its rear portion; if so, what constituted such extra heating surface?

A. The two ascending flues together with the horizontal flues at the base and top thereof I should consider additional heating surface.

Q. 8. Did you learn from said Shepard for what purpose said extra heating surface was used?

Objected to as hearsay and irrelevant.

A. I learned from Mr. Shepard that the construction which I have described was what was known to the trade as a fire-place heater, the additional heating surface being utilized to heat air circulating through the fire-place or chimney in which it was enclosed, for the purpose of warming apartments above that in which the heater was located.

Q. 9. Where was the opening to the top magazine feed in the heater which you have referred to in your 6th answer with reference to the mantel line?

A. It would project from the front of the mantel into the apartment.

Q. 10. Then this heater which you saw at Shepard's in the year 1864–'5 could have been fed in at the top with fuel and in front of the mantel; that is, in through the opening in front of the mantel?

Objected to as leading.

A. The construction of the heater was such that fuel must necessarily be supplied to the magazine in the manner described in the question.

Q. 11. Did the magazine extend up to the top frame of the heater so that by the feed opening you could feed fuel directly into it?

Objected to as leading.

A. It did.

411 Q. 12. Was the fire-place heater that you then saw in said Shepard's establishment such a heater as could be applied to practical use?

Objected to as incompetent and as leading.

A. It was such a heater.

Q. 13. Did said Shepard at that time say anything to you about it or similar fire-place heaters having been previously sold by him,

and put into practical use in the city of New York or elsewhere in the United States by him or his firm?

Objected to as calling for hearsay evidence and as leading.

A. He exhibited the same heater to me as representing heaters which he had sold many years previous. I cannot recall any special mention of places where he had put them in operation. He stated substantially this represents fire-place heaters which I sold years ago.

Q. 14. Did you understand him to say that they were sold at his place of business, and to be used within the United States?

Objected to as irrelevant and as calling for hearsay evidence.

A. I so understood him.

Q. 15. Please look at the circular now shown you, marked Defendants' Exhibit Brown No. 3, and state if you see on it any illustration of the fire-place heater which you so saw in Shepard's establishment in the year 1864–'5.

Objected to as irrelevant.

A. I do; designated as "Saracenic parlor grate for dining-rooms, &c." It is represented upon the said exhibit with the fire-place frame attached to it. The one I saw at Mr. Shepard's store was without this frame.

412 Q. 16. Is the magazine with its top-feed opening in front of the mantel frame in the illustration you have referred to in Defendants' Exhibit Burner No. 3?

Objected to as leading.

A. It is; that portion of the illustration above the openings in the front of the heater represents the magazine projecting from the mantel into the room, and the cover to the top opening of the same is shown with an urn resting upon it.

Q. 17. Did said Shepard ever give you in his lifetime a description of the Nott fire-place heater and a drawing of it in his, Shepard's, own handwriting, as such fire-place heater was commenced to be made by Shepard's firm; if so, when did he do so, and will you produce the paper?

Objected to as irrelevant and as calling for hearsay evidence.

A. He did, a short time previous to showing me the heater to which I have referred. I now produce the paper upon which is the description and the drawing.

The drawing and writing put in evidence as Defendants' Exhibit Liddle No. 1, J. A. S., examiner.

Q. 18. Is this paper in the handwriting of Mr. Shepherd?

Objected to as leading and as incompetent.

A. It is, I believe, in the handwriting of Mr. Shepherd, and was prepared by him for me and personally delivered to me.

Q. 19. Did you ever see this original patent of Nott's of October 25, 1832?

A. My impression is that Mr. Shepherd had it among other old patents which he showed me, but I am not positive as to this.

413 Q. 20. You have looked, have you not, at the reissue of this patent of October 25, 1832, dated October 17, 1835? Do you find this same language of Shepherd's handwriting in that reissue?

A. I do not.

Q. 21. Please look at the letter now shown you, and which is marked Defendants' Exhibit Liddle No. 2, and state what it is.

A. A communication from the Patent Office of the United States, under date of January 23d, 1880, stating that "upon search it is found that said patent granted E. Nott October 25th, 1832, has never been restored."

Defendants' counsel offers in evidence this Patent Office letter as Defendants' Exhibit Liddle No. 2, J. A. S., examiner.

Also puts in evidence the Patent Office letter of Jan'y 27, 1880, relative to Nott's patents and reissues, which is marked Defendants' Exhibit Liddle No. 3, J. A. S., Ex'r.

Q. 22. Did you ever manufacture or have knowledge of the manufacture of a fire-place heater by your father, and did you ever introduce a top magazine feed in one of them; if so, when?

Objected to as leading.

A. I superintended the manufacture of a fire-place heater known as the Peerless fire-place stove heater, and introduced a top-feed magazine in the same in the year 1868. This heater was in operation with a top-feed magazine during several subsequent years at No. 306 Bedford avenue, Brooklyn.

Q. 23. Did the magazine come up to the top frame or plate of the heater, and was the fuel fed into the top of it through an opening directly in front of the mantel frame, as with Shepard fire-place heater which you had previously seen in 1864 or '5, as stated?

414 Objected to as leading and as assuming as facts that of which there is no evidence.

A. The magazine came up to the extreme top plate of the heater; the fuel was fed to it through an opening in the top, which opening was outside of the front line of the mantel.

Q. 24. Did it have extended heating surface at the rear and connected therewith in principle, as shown in the fire-place heater which you so saw in Shepard's establishment in 1864 or '5?

Objected to as leading and as incompetent.

A. It had a rear heating surface, although differing in construction from that of the fire-place heater shown me by Shepard.

Q. 25. Did it heat the room above that in which it was placed by means of the heat generated from this extended heating surface at the rear?

Objected to as leading.

A. It did, and was intended for this purpose, and in this respect was substantially the same as the fire-place heater shown me by Shepard in 1864 or 1865.

Q. 26. In putting magazine with top feed into this heater did you obtain any ideas respecting the construction or arrangement thereof from the alleged J. M. Thatcher invention, as set forth in his patent 14th June, 1870?

Objected to as leading and as irrelevant.

A. I did not. I had been selling largely parlor stoves, among which was the "Morning Glory," the "Empire Gas Burner," and the "Oriental," all of which embodied magazine, the former and the latter top-feed magazines. I had invented an air-heating furnace, to which I embodied a magazine, and for which I obtained
415 letters patent of the United States on the date of August 26, 1867, and it was my familiarity with these and other structures that suggested the adoption of the magazine in the Peerless fire-place stove or heater. I had sold up to this time hundreds of the aforesaid stoves, which embodied top-feed magazine.

Adjourned to Wednesday, February 18, 1880, at 9.30 a. m.

NEW YORK, *February* 18, 1880—9.30 o'clock a. m.

Met pursuant to adjournment.

Present: A. J. Todd, Esq., of counsel for defendant, and Wm. H. L. Lee, Esq.

The examination of ROBERT Z. LIDDLE, Esq., continued:

Q. 27. Please describe the sketch which Mr. Shepard made on the back of the paper which is marked Defendants' Exhibit Liddle No. 1.

Objected to for the reason that the sketch is in evidence, and is the best evidence for what it represents.

A. It represents a fire-place stove or heater. The front portion, which embodies a magazine for reserved fuel, with an opening in the top for supplying said fuel, and a portion of the fire-pot and ash pit below, stand outward from the mantel line into the room; the rear portion enclosed in the chimney or fire-place within the mantel line, the said rear portion being a series of flues extending the line of the passage of the products of combustion for the purpose of increasing the heating capacity, said flues being surrounded by an air-circulating chamber or chambers.

416 Q. 28. How are these various parts marked on the drawing, if any of them are indicated by pencil writing therein?

The same objection.

A. The two ascending rear smoke-flues marked "flue;" the air-circulating chamber is marked "air space."

Q. 29. Annexed to Mr. Hassen's deposition is a sketch marked Exhibit Hassen for identification; please state who made it, and under what circumstances it was made.

A. I made it as a rough sketch of the drawing shown on the paper marked Defendants' Exhibit Liddle No. 1; it was made for the purpose of representing the general construction of the Nott fire-place stove.

Q. 30. From what was it made, and what kind of a section view does it represent?

A. It was made from the drawing on paper, Defendants' Exhibit Liddle No. 1, and a cross-section of said drawing from front to rear.

Q. 31. What do the letters I, K, and L represent in that sketch which you so made?

A. The letters I and L represent the air space; the letter K, the hollow plinth which forms the base for the stove. I wish to add to my answer to Q. 28, as I had not answered it fully: I also find arrows indicating the course of products of combustion, and the course of the heated air.

Q. 32. Was all this description and handwriting in the drawing Liddle Exhibit No. 1 when you received it from Mr. Shepard?

Objected to as leading.

A. It was.

Q. 33. Please look at the Defendants' Exhibit Brown No. 2, and state whether or not it represents a Shepard top-feeding maga-
417 zine fire-place heater, which you saw in Shepard's place of business, so far as the principle of having extended heating surface at its rear, and a top-feed magazine in front of the mantel portion of the heater is concerned.

Objected to as leading, and protest is made by complainants' counsel against the form in which the questions are put by defendants' counsel, as they embody in the questions statements of the supposed facts which it is desired to prove, and are so framed as to prompt the witness. This objection applies to all the questions which have been objected to as leading, and notice is given that on the hearing complainants' counsel will move to strike out the testimony of this witness upon the grounds noted in the objections taken.

Defendants' counsel denies this sweeping charge and personal attack in the form of an objection on the intelligence of the witness, and claims that the witness' answers sufficiently refute this charge, which answers are apparently the cause of this alleged grievance, the questions being intended merely to direct the witness' attention to the subject-matter inquired of.

A. It does, substantially; although the rear extended heating surface differed somewhat in form, said difference, however, would not produce any material difference in the principle or operation of that portion of the structure. In the fire-place stove which I saw at Mr. Shepard's, and which I have before described, there were two rear ascending smoke-flues of rectangular form, while Exhibit Brown No. 2 shows 3 rear ascending smoke-flues cylindrical in form; the flue at the top of the rear ascending smoke flues, I think, did not extend forward and join the rear wall of the stove proper, while in the model, Brown No. 2, it does so extend.

418 Q. 24. How was the damper-flue or opening from the top of the magazine feed-back arranged in that Shepard heater, as shown in the tin model or otherwise?

The same objection and notice, and question objected to as assuming that there was such a flue or opening.

A. I think there was a flue passage from the upper portion of the magazine to the horizontal flue at the top of the rear ascending flues, which passage was governed by a damper. The object of this flue passage, I understand, was to allow the escape of the gases which would accumulate at the top of the magazine before opening the top cover of the same to prevent explosion of said gases.

Q. 35. Of what was the top-feed magazine in this Shepard fire-place heater composed—that is, the interior portion or inside part of it?

A. It had a lining of fire-brick.

Q. 6. Irrespective of the existence of this Shepard fire-place heater from the state of the art, as it existed at any time between the years 1864 and 1870, would there have been any difficulty at any time during those years in putting a top-feed magazine or fuel reservoir in a fire-place heater; that is to say, a fuel reservoir which would be in front of the mantel and extend up to the outward top casing of the stove portion of the fire-place heater, and having an opening with a cover to it in such top and leading directly into the fuel reservoir, and give your reasons for your answers.

The same objection and notice, and objected to as incompetent.

A. There would not. It would require simply mechanical labor to place a top-feed magazine which had been long in use into many of the fire-place heaters then upon the market. I did not require any greater skill in putting such a magazine in a Peerless fire-place stove or heater with reference to which I have testified.

419 Q. 37. Prior and up to and including the years 1864 and '5 were fire-place heaters other than the Shepard heater, containing extended heating surface at the rear, in use in the U. S. heating rooms above those in which they were placed, and did such fire-place heaters have sufficient capacity in their stove portion to introduce such a magazine, as referred to in the last question, which could be fed at the top and in front of the mantel without any alteration or change in the construction of such fire-place heaters other than what the mere insertion of such a magazine would require, and which would be obvious to any ordinary workman?

The same objections and notice.

A. I think there were.

Q. 38. Was not the Peerless heater such a fire-place heater? And give the earliest date—when it was first made.

The same objections and notice as to first part of question, and latter part of question objected to as already answered.

A. It was; it was first made in the year 1866–'7.

Q. 39. Can you mention the names of some other such fire-place heaters with extended rear surface, which were in the market as early as the years 1864, 5, and 6?

Objected to as assuming that such fire-place heaters were in existence at the times mentioned.

A. I think the "Etna," which I think was manufactured by Spalding, and also by Tomkins; the Bird heater; the Lester heater—all projected far enough in front of the mantel to have admitted the top-feed opening to a magazine were it embodied in them. My impression is that the two latter were on the market at the date named, although the Lester heater may have been put upon the market about the year 1867.

420 Q. 40. During the years 1865, 66–7, were outstanding stoves made and used in the U. S. centaining a magazine in the body of the stove and extended up to the top plate of the stove with an opening in such top plate and cover, by means of which the fuel could be directly fed into such magazine and through such opening?

The same objections as to Q. 34 and notice.

A. They were largely manufactured and sold, were the popular construction of stove during the years mentioned; among such stoves I will mention the "Morning Glory," the "Oriental," the "Excelsior," and the "Morning Light." Nearly every prominent stove manufacturer was making such a stove.

Q. 41. Given such a stove with a top-feeding magazine element in it, and a fire-place heater containing extended heating surface at its rear, and a capacity to retain within its stove portion such a magazine, so as to be fed from the top and in front of the mantel, how obvious would the introduction of such top feed magazine in the other class of stoves be?

The same objections and notice.

A. It is a very simple matter, simply moving the top-feed magazine from the one to the other. The only change required being one of form, in order to make the parts of the structure fit properly together.

Q. 42. Would the Shepard fire-place heater as represented in Defendants' Exhibit, Liddle No. 1, Exhibit Hassen, and Exhibit Brown No. 2, heat the room in which it would be placed as well as any room above that in which it would be placed, and to which the hot air might be conducted into?

The same objections and notice and objected to as assuming that the exhibits referred to accurately represent the Shepard heater and represent the same thing.

421 A. It would, the surface of the stove proper which projects into the room would heat the same, while the extended heating surface enclosed within the fire-place would heat air for conduction to other room, the same as fire-place heaters generally do

Q. 43. Question repeated with respect to the fire-place heater which you state Mr. Shepard showed you at 242 Water street, in the year 1864–65.

The same objections and notice.

A. The same answer as to Q. 42.

The witness says he wishes to correct his answer in which he stated the date of the Letters Patent granted to him for a self-feeding air-heating furnace, was August 26, 1867. I should have said November 26, 1867.

Cross-examined by WM. H. L. LEE, Esq.:

X Q. 44. Will you please state how you fix the date of 1864 or 1865, as the date when M. Shepard spoke to you about the heater which he said represented the Sarascenic heater.

A. As I have before stated, it was during the litigation between Mr. Thatcher and Merklee, at which time he was a witness in the case, and as I have said I think said litigation was during the year 1864 and 5.

X Q. 45. Will you please state how it happened that Mr. Shepard spoke to you about the matter.

A. I applied to Mr. Shepard for information with reference to matters in dispute in the said litigation, he produced a number of drawings and various data with reference to old construction stoves, and the paper marked Defendants' Exhibit Liddle No. 1, is one of them.

X Q. 46. Were you interested in said suit, and if so how?

422 A. I was acting for Mr. Merklee; I had no other interest in it?

X Q. 47. Were you in Mr. Merklee's employ, and, *in* so, in what capacity?

A. I was not in his employ; I was acting as a witness or expert in the case.

X Q. 48. Were you examined as a witness in the case?

A. I was.

X Q. 49. Did you have this conversation with Mr. Shepard before or after you were examined as a witness?

A. I had several conversations with Mr. Shepard with reference to these matters; some may have been before and some after I was examined, as I was examined, I think, several different times.

X Q. 50. Did Mr. Shepard first show you what he stated to be the representation of the Saracenic heater before or after you were first examined as a witness in Thatcher *vs.* Merklee?

A. My impression is that it was before.

X Q. 51. How long before?

A. It was about that time; I am unable to state definitely with reference to how long before or how long after.

X Q. 52. Your best recollection is that Mr. Shepard first showed you the alleged representation of the heater very near the same time that you were first examined as a witness in Thatcher *vs.* Merklee, but probably a short time before. Is this correct?

A. As I have stated, it was about the time I was examined as a witness.

X Q. 53. You have stated that you were examined as a witness several times in Thatcher *vs.* Merklee. How long an interval elapsed between your earliest and latest examination in said suit?

A. I have stated that I was a witness in the case, and that I thought I was examined several times; I am unable to state definitely as to what time elapsed between said examinations.

X Q. 54. State as nearly as you can.

423 A. My impression is that my examination was materially concluded within a week's time.

X Q. 55. Do I understand correctly then that your examination was begun and continued from day to day, or with brief adjournments, until it was concluded, and that probably less than a month elapsed between the first and last time you were examined in Thatcher *vs.* Merklee, according to your best recollection?

A. I think you are correct in your understanding of the matter; my impression is that I gave some testimony perhaps later than a month with reference to a Mott stove, which was an exhibit in the case.

X Q. 56. What was the subject of the suit of Thatcher *vs.* Merklee?

A. An alleged infringement by Mr. Merklee of Mr. Thatcher's patent of 1852; I think it was in the manufacture of air-heating furnaces.

X Q. 57. What was the patent for?

A. It was, among other things, for a combination of inverted frustrum of cone with air passages through them, said frustrums being inclined inwards and downward towards the fire-pot for the purpose of preventing the accumulation upon the upper surface of the same of non-conducting substances.

X Q. 58. Was there more than one suit of Thatcher *vs.* Merklee in which you were examined as a witness?

A. I think this was the only suit that I was examined as a witness in.

X Q. 59. The scope of your examination in that case was a comparison of the defendants' goods with structure described in the patent of the plaintiff, and the relations of prior patents and publications, and prior structures to the plaintiff's patent, was it not?

A. That was the character of my examination.

X Q. 60. In your answer to cross-question 44, you state that you think said litigation was during the year 1864 and '65, and that by this means you fix 1864 or 1865 as the date when Mr. Shepard showed you the alleged representation of the Saracenic heater; how certain are you of these dates?

424 A. Relying upon my memory, without reference to the record, I have such an impression; the record in that case will fix the date, and as I have testified it was at this time that Mr. Shepard and myself consulted about the suit, and when he gave me the paper marked Defendants' Exhibit, Liddle No. 1.

X Q. 61. Are you as positive as to the correctness of the dates

mentioned in the last question, as you are in regard to the after dates to which you have testified?

A. I am quite positive that it was during the early part of the litigation referred to.

X Q. 62. Question repeated.

A. I am positive to the extent stated in my answers.

X Q. 63. You misunderstand me. You said that the litigation of Thatcher *vs.* Merklee was in 1864 and 1865, and that by this means you fixed 1864 and 1865 as the date when Mr. Shepard showed you the alleged representation of the Saracenic heater. Now, what I wish to know, is whether you are as certain of the correctness of these dates as you are of the correctness of the numerous other dates to which you have testified?

A. In my answer I have qualified by stating I thought the litigation was in 1864 and 1865; I am not as positive with reference to those dates as to other dates to which I have testified, excepting where I have qualified my answers.

X Q. 64. By qualifying your answers you mean using some such expression as I think, or I believe, do you not; and in regard to such matters you are not positive, but merely giving your best recollection?

A. No; what I meant in the last answer, except where I qualified my answer, was that part of my testimony referring to the Lester fire-place heater, "Although it may have been put upon the market as late as 1867."

X Q. 65. Do you positively swear that Shepard showed you the alleged representation of the Saracenic heater, and that you were examined in Thatcher *vs.* Merklee prior to the year 1867?

A. I am willing to testify as to that; I do so testify.

X Q. 66. Do you positively swear that it was before 1866?

425 A. My impression is that it was; I am willing to testify that it was commenced before the year 1866.

X Q. 67. Who was the solicitor for Mr. Merklee in that case?

A. Thomas P. Howe.

X Q. 68. Who was the solicitor for Mr. Thatcher?

A. A Mr. Thompson.

X Q. 69. What became of the case?

A. It was compromised.

X Q. 70. What were the terms of the compromise?

A. By Mr. Merklee first agreeing to pay to the plaintiffs the sum of two hundred and fifty dollars, I think it was, and allowing the plaintiffs to take a decree; I think it was for nominal damages—the amount I am not prepared to state definitely; the settlement of the case was brought about through the experts, who were Harry Renwick for the defendants and Mr. Treadwell for the plaintiff.

X Q. 71. Did the defendants submit to an injunction?

A. The defendants, I think, discontinued the use of the alleged invention; and there was an understanding with the plaintiffs that they would purchase from the defendants such castings as embodied the alleged invention; which agreement, I believe, was carried out.

X Q. 72. What was Mr. Merklee's full name?

A. George F. Merklee.

X Q. 73. Give the names of the plaintiffs?

A. John F. Thatcher and Mr. Haviland. The firm-name was Thatcher & Haviland.

X Q. 74. Was it John G. Haviland?

A. I am unable to state, never having taxed my memory with Mr. Haviland's first name.

X Q. 75. Was this suit against Merklee brought in the southern district of New York?

A. It was.

X Q. 76. Where were you examined as a witness in it?

A. The old Burton Theatre building, in Chambers street, New York city.

426 X Q. 77. Do you remember how long it was between the commencement of this suit and its settlement?

A. I think about a year.

X Q. 78. Will you state precisely where this Saracenic grate was when Mr. Shepard showed it to you?

A. It was standing upon the second floor in his store, 242 Water street, about facing and near the front windows of the store.

X Q. 79. Which side of it was turned toward the window, and how far was it from the windows?

A. The front was substantially turned toward the windows, and I should think it was about one-third of the depth of the floor from the front of the store.

X Q. 80. Was it standing out in the middle of the floor?

A. Mr. Shepard had it moved out from among other stoves that were on the same floor so that we could examine it; I can't state definitely as to whether it was in the middle of the floor or not.

X Q. 81. Was it surrounded by or separate from other objects, and could you get around it so as to have access to every part?

A. It was separated from other objects so that we could get around it and examine the front, sides, and rear.

X Q. 82. State what interest you took in it, in view of the then pending controversy between Thatcher and Merklee *vs.* Thatcher's 1852 patent, and how it could have any bearing upon that controversy.

A. I took no special interest in it as having any bearing on that controversy; it had no special bearing on that controversy; I haven't stated it had.

X Q. 83. Did it have any bearing on any then existing controversy?

A. Not that I can recall to mind.

X Q. 84. State precisely what you did when Mr. Shepard had this structure moved out into the middle of the floor in the way of examining the structure.

427 A. I have not said that it was moved out into the middle of the floor; it was moved out or separated from other objects so that we could examine it, and which we did by looking it over, more particularly with reference to its form and principles of operation.

X Q. 85. Will you please state how much time you spent in this inspection?

A. I can't state definitely the time consumed; long enough to look it over, which would not occupy any great length of time.

X Q. 86. Did you occupy as much as one minute?

A. Yes; probably half an hour, more or less.

X Q. 87. Are you sure that you looked at it for ten minutes?

A. Yes.

X Q. 88. You have spoken of an opening on the top of the Saracenic grate. What was the size of that opening?

A. I should think it was about 8 by 10 or 12; I can't state definitely, as I didn't measure it.

X Q. 89. Was it oval or square?

A. It was square or of rectangular form.

X Q. 90. How wide was the grate proper?

A. I should think about 12 or 14 inches in breadth; I can't state definitely as to the dimensions, as I did not measure it.

X Q. 91. What closed the hole in the top of which you have just spoken?

A. My impression is it was substantially a flat cover plate.

X Q. 92. Are you positive about that?

A. I am positive that that was the general form of it.

X Q. 93. Are you sure that that plate was not round?

A. I am quite sure it was not.

X Q. 94. Was anything attached to this plate?

A. I don't remember of anything being attached to it.

X Q. 95. How was it lifted off and put on?

A. It was lifted up from the front towards the rear.

X Q. 96. How was that done?

A. It might have been [done] with any suitable instrument;
428 I didn't see any provided for that purpose.

X Q. 97. Did you see it taken off or put on?

A. We opened it; we lifted it up and looked into the interior of the structure.

X Q. 98. How did you lift it up?

A. With our hands. My impression is there was a projection on the cover for that purpose, and as there was no fire in the structure we could handle it with our hands without the aid of any other instrument.

X Q. 99. What was the shape of that projection and how large was it?

A. I don't know that I can testify definitely with reference to the shape or size.

X Q. 100. State as near as you can.

A. My impression is it was an ordinary lift.

X Q. 101. You have referred to a wood cut in exhibit, Defendants' Exhibit Brown No. 3, called Saracenic parlor grate for dining-rooms, &c., and you have stated that it represented the structure shown you by Shepard. Can you state positively that all the parts visible in said wood cut were in the heater shown you by Shepard?

A. I have stated that it substantially represented the front por-

tion of the heater, but that the structure which I saw was without the frame and the urn. I have no recollection of seeing the frame or the urn. The general appearance of the front shown in the wood cut is the same as that of the heater.

X Q. 102. Then all that you saw is what is represented in this wood cut as having a square front with an urn resting upon it, so far as the parts are concerned — shown in the wood cut?

Objected to as indefinite.

A. The wood cut represents substantially the square front of the heater which I saw, but, as I before stated, I have no recollection of any urn located upon it as shown in the wood cut.

X Q. 103. (Question repeated.)

The same objection.

429 A. That was not all I saw.

Objected to as irresponsive.

Witness continues: I haven't finished my answer. The structure, with the exception of the frame and the urn.

The same objection.

X Q. 104. (Question repeated.)

The same objection, and as the witness should be asked what he did, in fact, see, and as the question apparently has a double meaning, calculated to mislead.

A. I saw the square front represented in the wood cut upon which the urn is there shown as resting.

X Q. 105. And that is all that you saw of those parts which are represented in this wood cut; is that not true?

A. I think it is.

X Q. 106. How do you know that this "Saracenic parlor grate," which Shepard showed you, was not designed to be set in a chimney breast, the mouth of which was partly closed by it and partly by a castellated or turret ornamented urn facing, such as is shown in the wood cut, the facing or the side pieces thereof being perforated with a number of holes to let the heated air out from the rear of the apparatus into the room; and how do you know that this apparatus which you saw was not a part of a structure designed to utilize in the dining-room, &c., in which it was placed heat which would otherwise be wasted, radiated from the rear of the apparatus, the product of combustion passing through a smoke-pipe of less area than the area of the chimney, the chimney around this smoke-pipe being closed by a plate, so as to deflect this heated air from the rear of the apparatus outward through a number of holes
430 perforated in the side pieces to let the heated air into the room?

A. I know from the fact that Mr. Shepard exhibited the structure to me as a fire-place heater, which was commonly known to the trade as an apparatus designed to heat the room in which it was placed as well as other adjacent rooms.

X Q. 85. Will you please state how much time you spent in this inspection?

A. I can't state definitely the time consumed; long enough to look it over, which would not occupy any great length of time.

X Q. 86. Did you occupy as much as one minute?

A. Yes; probably half an hour, more or less.

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Objected to as indefinite.

A. The wood cut represents substantially the square front of the heater which I saw, but, as I before stated, I have no recollection of any urn located upon it as shown in the wood cut.

X Q. 103. (Question repeated.)

The same objection.

429 A. That was not all I saw.

Objected to as irresponsive.

Witness continues: I haven't finished my answer. The structure, with the exception of the frame and the urn.

The same objection.

X Q. 104. (Question repeated.)

The same objection, and as the witness should be asked what he did, in fact, see, and as the question apparently has a double meaning, calculated to mislead.

A. I saw the square front represented in the wood cut upon which the urn is there shown as resting.

X Q. 105. And that is all that you saw of those parts which are represented in this wood cut; is that not true?

A. I think it is.

X Q. 106. How do you know that this "Saracenic parlor grate," which Shepard showed you, was not designed to be set in a chimney breast, the mouth of which was partly closed by it and partly by a castellated or turret ornamented urn facing, such as is shown in the wood cut, the facing or the side pieces thereof being perforated with a number of holes to let the heated air out from the rear of the apparatus into the room; and how do you know that this apparatus which you saw was not a part of a structure designed to utilize in the dining-room, &c., in which it was placed heat which would otherwise be wasted, radiated from the rear of the apparatus, the product of combustion passing through a smoke-pipe of less area than the area of the chimney, the chimney around this smoke-pipe being closed by a plate, so as to deflect this heated air from the rear of the apparatus outward through a number of holes
430 perforated in the side pieces to let the heated air into the room?

A. I know from the fact that Mr. Shepard exhibited the structure to me as a fire-place heater, which was commonly known to the trade as an apparatus designed to heat the room in which it was placed as well as other adjacent rooms.

X Q. 107. Then all you know concerning the matters enquired of in Q. 106 is that Shepard, in showing you this thing, called it a fire-place heater instead "of a parlor grate for dining rooms, &c.;" is not that true?

A. That was not all I know. My knowledge of constructions of stove and heater constructions shows that this would be a practical and operative apparatus, as what was known to the trade as a fire-place heater, adapted for heating the room in which it was placed as well as adjacent rooms.

X Q. 108. Can you state any reason why you know or can be able to know that this apparatus was not designed to operate as mentioned in X Q. 106, and that such was not the manner in which it was used?

A. Yes; for the reason that Mr. Shepard stated its use. I do not mean to say that the structure which I saw could not be utilized to force all the heat from the extended heating surface of the rear forward into the apartment into which it was located, or to heat the air from the same surfaces for conduction to other appartments.

All except the first nine words objected to as irresponsive and volunteered.

X Q. 109. Can you state any reason why you know, or can be able to know, that this apparatus was not designed to operate as mentioned in X Q. 106, and that such was not the manner in which it was used, excluding the fact you have stated that Shepard called it a fire-place heater instead of a parlor grate?

A. I have stated that Shepard represented it to me as a fire-
431 place heater for use to heat the apartment in which it was placed and at the same time adjacent apartments. My knowledge of its use was not derived simply from Mr. Shepard's calling it a fire-place heater, but from his stating that it was intended to be used as I have already explained, and from the further fact that I knew it could be so used.

X Q. 110. Can you state any reason why you know or can be able to know that this apparatus was not designed to operate as mentioned in X Q. 106, and that such was not the manner in which it was used, excluding what Shepard told you?

A. I don't think I have stated that it was not designed to be used in the manner stated in the question, but, on the contrary, I have described how it might have been so used; I have no knowledge with reference to its use except as before stated.

X Q. 111. Was that particular Saracenic grate the only structure of the kind you ever saw down to the present time?

A. That was the only Saracenic grate I have ever seen.

X Q. 112. How extensive has been your acquaintance with stoves and heaters, and where have you had knowledge of them?

A. I have been actively engaged with stove and furnace business for more than twenty-five years, with the exception of the six years last past, in the city of New York, and since the 12th day of November, 1873, in the city of Albany, N. Y.; I have, during much of the latter part of my residence in the city of New York, and dur-

ing much of the time of my residence in Albany, been engaged in litigation of stove patent cases, and made extended examinations with reference to stoves and furnaces and patents relating thereto.

X Q. 113. Did you ever examine that Saracenic heater more than once?

A. I did not.

X Q. 114. Can you undertake, at this distance of time, to recollect accurately a stove structure that you looked at in 1864 or '5, as
432 you say, and had never seen since, or one like it, especially in view of the pursuits you have been engaged in, necessitating the examination of great numbers of structures for heating purposes?

A. I can.

X Q. 115. Can you name any other structure that you examined about the same time—say within a year?

A. I can.

X Q. 116. Please name them.

A. A heating-stove that was manufactured by Jordan L. Mott.

X Q. 117. Have you ever seen any structures like that Mott stove since?

A. I have not.

X Q. 118. Did you not examine that Mott stove for the purpose of being examined as an expert upon it?

A. Yes.

X Q. 119. Was this structure which you saw at Shepard's broader in the rear than in the front at the top?

A. I think the rear horizontal flue was broader than the upper portion of the front of the structure.

X Q. 120. Do you recollect how much broader, with any accuracy; was it as much as four inches on each side, or eight inches in all?

A. I don't recollect with any accuracy as to how much broader this flue was than the upper portion of the front; my impression is that it was broader.

X Q. 121. Was the top of this horizontal flue rectangular?

A. It was of rectangular form.

X Q. 122. Was there anything to indicate on that heater where the facing or frame was to be placed?

A. My impression is there were flanges or lugs to which the frame might be attached, or, in other words, to guide the relative position of the frame to the structure.

X Q. 123. Were not these flanges or lugs at the point where there was a rectangular shoulder formed by the greater width of the top of the rear over that of the top of the front of the apparatus?
433 A. My memory is not clear upon this point, for the reason that there was no frame attached to the heater which I saw. There was such a rectangular shoulder, but I do not remember whether it coincided with the position of the lugs or not.

X Q. 124. How far was the bottom of the grate from the bottom of the whole structure?

X Q. 107. Then all you know concerning the matters enquired of in Q. 106 is that Shepard, in showing you this thing, called it a fire-place heater instead "of a parlor grate for dining rooms, &c.;" is not that true?

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X Q. 124. How far was the bottom of the grate from the bottom of the whole structure?

A. I should say about eight inches, more or less; I did not measure it.

X Q. 125. What was the shape of the grate, and its dimensions?

A. It was a dishing grate; I should think about six to twelve inches or thereabouts; it may have been wider than that; I did not measure it.

X Q. 126. What do you mean by a dishing grate; do you mean one that is concave?

A. A dishing grate would be concave.

X Q. 127. Was the coal designed to rest on the concave or the convex side?

A. There was no coal in it, and the question as to what side of the grate the coal rested on I have no recollection of its being raised.

X Q. 128. Then the answer to your last question should have been that you did not know; is that true?

A. No; my impression is that the coal would rest upon the concave side of the grate, although the grate might be reversed.

X Q. 129. How great was the concavity or convexity of the grate?

A. I can't state definitely; I didn't think the depression was a half circle; [to] my best recollection, it was depressed two or three inches, more or less; I didn't examine the grate critically.

X Q. 130. Was there only one set of grate-bars?

A. My impression is that the front portion of the fire-chamber was grated for illuminating purposes in the front of the heater; I should think about six inches in height.

X Q. 131. Are you sure of this?

434 A. I am not positive as to this point, but there was a door or elongated openings in the front which were, I should say, intended to be filled with mica for illuminating purposes.

X Q. 132. Did you measure the damper at the extreme top of the fire-box?

A. I did not; I made no measurements of any of the parts.

X Q. 133. Can you state accurately the size of any of the dampers or flues?

A. I cannot definitely.

X Q. 134. When did you make the sketch Exhibit Hassen, and where, and at whose request?

A. I made it about a month ago, at the request of Mr. Rice.

X Q. 135. Is Mr. Rice in the employ of Jordan L. Mott?

A. It's my impression that he is; I have no definite knowledge of the fact.

X Q. 136. Give his name in full.

A. C. C. Rice.

X Q. 137. Where has Defendants' Exhibit Liddle No. 1 been since it first came into your possession?

A. It has always been in my possession.

X Q. 138. Did Mr. Charles J. Shepard give it to you with his own hand?

A. He did.

X Q. 139. Was it before or after you looked at the Saracenic grate?

A. It was before.

X Q. 140. Did you see him write it or make the sketch upon it?

A. I did not see him write it or make the sketch upon it.

X Q. 141. Have you ever seen Mr. Shepard write?

A. I have.

X Q. 142. Did you know his handwriting?

A. Yes.

X Q. 143. Where has this sketch been kept since you first got it; in what place and in what manner?

435 A. It has been kept locked up in a tin box which I have for preserving such papers.

X Q. 144. When did you first begin to make fire-place heaters?

A. I was associated with my father in constructing the fire-place heater as early as the years 1866 and 1867.

X Q. 145. Had your father constructed them previous to that time?

A. He had constructed one previous to that time.

X Q. 146. Prior to the year 1868 had this manufacture of fire-place heaters by you and your father been extensive?

A. Not very extensive; our trade in them was a local trade, mostly confined to the cities of New York, Brooklyn, and adjacent cities and towns; I think that there were manufactured and sold in the neighborhood of one hundred.

X Q. 147. When did your accurate acquaintance with the stove business begin?

A. I was first engaged in the stove business in the year 1854, as clerk for my father, at 231 Water street, New York city.

X Q. 148. Did your accurate acquaintance with fire-place heaters, their construction and mode of operation, begin in 1866, when you began to make them?

A. It began earlier—about the years 1863–'4.

X Q. 149. Under what circumstances did it thus begin?

A. From seeing them in the market.

Redirect by A. J. TODD, Esq.:

R. D. Q. 150. Is there any difference between the fire-place heater which you so saw in Shepard's place of business and the heater which is shown in the drawing of Liddle Exhibit No. 1, so far as the top-feed magazine and extended heating surface at the rear is concerned?

A. No material difference, one is a substantial representation of the other.

436 R. D. Q. 151. Could any practical stove manufacturer construct or make patterns for a fire-place heater, from which a fire-place heater itself could be produced that would contain a magazine feed which would extend up to the top plate of the heater, and be fed in from an opening in front of the mantel, and also contain extended heating surface at its rear, substantially as shown in the drawing of Exhibit Liddle No. 1, from that drawing, that would be a practical and useful fire-place heater, which would not only heat the

room into which it partially projected, but which would also heat the room above that in which it was located?

Objected to as leading and as not redirect.

A. I think it could be done.

R. D. Q. 152. Have you found the date when the Thatcher *et al. vs.* Merklee suit was begun and terminated? If so, please state it.

A. I have. It was begun in August, 1866, and terminated in April, 1867.

R. D. Q. 153. Having reference to your answer to Q. 105, did you mean to state that the only portion of that Shepard fire-place heater you examined was the portion which can only be seen in the wood-cut on Defendants' Exhibit Brown No. 3, that merely purporting to be a front view of the heater?

A. I did not mean to be so understood.

R. D. Q. 154. Did the heater which you then saw in Shepard's place have the appearance of newness or age?

A. It had the appearance of age.

R. D. Q. 155. Did said fire-place heater contain the openings for letting off the products of combustion and gases to the chimney and the hot air to an apartment above, substantially as shown in the drawing of Exhibit Liddle No. 1?

Objected to as leading.

437 A. It did contain an exit opening for the passage of the products of combustion and an air-circulating space or chamber, which I think I have explained in the earlier part of my testimony.

R. D. Q. 156. You have referred to a heating stove manufactured by Jordan L. Mott which you say you saw within about a year after having seen this Shepard fire-place heater. Did said Mott's fire-place heater have a magazine feed in it by which the fuel could be fed in directly to the magazine at the top and in front of the mantel, and did it contain extended heating surface at the rear and behind the mantel, so as to heat the room above that in which the heater was situated?

Objected to as leading and as not redirect.

A. The Mott structure, to which I have referred, was not a fire-place heater, but an ordinary outstanding parlor heating stove; it embodied a magazine for reserved fuel, but there was no extended heating surface at the rear.

R. D. Q. 157. You testify, in answer to X. question 123, that your memory is not clear as to the flanges or lugs; do you mean that your attention was directed particularly to such points, as it was to the points you have testified to on the direct examination?

A. I do not mean that it was directed particularly to such points.

R. D. Q. 158. Is your memory clear and distinct as to its having a top-feed magazine in front of the mantel and extended heating

surface at its rear, substantially as you have described it in your direct examination?

A. It is quite clear.

Adjourned to Thursday, February 19, 1880, at 10 o'clock a. m.

438 NEW YORK, *February* 19, 1880—10 o'clock, a. m.

Met pursuant to adjournment.

Present: A. J. Todd, Esq., of counsel for defendants, and Wm. H. L. Lee, Esq., of counsel for complainants.

Redirect examination of ROBERT Z. LIDDLE, Esq., continued by A. J. TODD, Esq.:

R. D. Q. 159. I see in the drawing contained in the Defendants Exhibit Liddle No. 1 two pipes represented with two sets of arrows leading into them. State specifically what these refer to, and how in those respects this fire-place heater which you so saw at Shepard's place of business was similar or different.

Objected to as not redirect and as incompetent.

A. One pipe, that at the left in which there is shown a damper, represents a flue for the passage of the smoke, the direction of which is indicated by the arrow pointing into the same. The other at the right represents a flue for the passage of heated air, the course of which is also indicated by 3 arrows pointing upwards. The operation of the heater which I saw at Mr. Shepard's place of business would be in practice substantially the same as shown in the drawing to which I have referred upon Defendants' Exhibit Liddle No. 1.

R. D. Q. 160. What is the sketch intended to represent which is at the left of the drawing you have just referred to?

The same objection.

A. The two ascending smoke-flues, together with the horizontal flue at the top of the same, with its smoke-exit opening, all of which is shown in the complete sketch as located at the rear of the structure proper and within the chimney or fire-place.

439 R. D. Q. 161. At and for many years prior to the time when said Shepard so showed you this fire-place heater, as you have testified, how was the hot air conducted from fire-place heaters then in use as manufactured and sold by different stove dealers to the apartment above—that in which the fire-place heater was set?

The same objection.

A. It was a common practice to conduct the heat through the brick flue of the chimney—through which the smoke-pipe also passed—for the purpose of producing additional heating surface, the said flue being closed at a convenient point above by a throat piece or a brick arch through which the smoke-pipe was allowed to pass, discharging its contents to the unobstructed flue above, the breast of the chimney being pierced just below the throat piece to force the ascending current of heated air outward into the apartment above that in which the heater was located.

R. D. Q. 162. Now, assuming for the purposes of our argument that the fire-place heater which said Shepard made and put into use prior to 1867, and like the one which he showed you, was set so that the air which circulated and was heated by the extended heating surface at the rear was only utilized by permitting of its flow back into the apartment in which the heater was set, would it require any change in the structure of the heater, either in the change of its rear extended heating surface or in its top-feed magazine, to permit such heat to flow or pass up into the apartment above that in which the heater was set?

The same objection and notice as to Q. 33.

A. It would not require any change in the parts named. When the outlet for heated air in the upper apartment is closed then the same would be forced out into the apartment in which the heater was set.

R. D. Q. 163. Assuming said Shepard had set such heaters so
440 that this circulated and heated air at the rear could only come into the room in which the heater was set, would there be any change necessary in the construction of the heater itself in order to send the circulated and heated air to the apartment above when desired, as well as the apartment in which the heater is placed?

The same objection and notice.

A. There would not. The only change would be in the location of the throat piece or arch in the chimney flue to a point above the line of the floor of the upper room and piercing the breast of the chimney helm; said throat piece or arch, and between the same and the floor of the upper apartment, to allow the heated air, which would otherwise be confined to the apartment in which the heater was placed, to pass out into the same.

R. D. Q. 164. Now, assuming for the purposes of this argument that what you state in the last answer was not done with the Shepard top-feed fire-place heaters, was such done with other fire-place heaters in 1867 and for many years prior thereto to your own knowledge, and can you point to any fire-place heaters now present from which the heat was so let off to warm the apartment above that in which it was set?

The same objection and notice and objected to because the witness is not named in answer.

A. It was so done. I refer to two fire-place heaters now present known as "The American," manufactured and sold by B. C. McCann & Co. in Brooklyn, N. Y., and the "New York" (marked Defendants' Exhibit Bird No. 2), manufactured and sold by W. Jackson & Son in the city of New York. The latter was in use to my personal knowledge as early as 1863 and the former as early as 1866 and, I think, for several years previous.

R. D. Q. 165. Did you use generally or in your father's family either one of those heaters prior to the year 1867, substantially as you have stated?

The same objections.

441 A. There was one of the Jackson heaters used in my father's family, in Ryerson street, Brooklyn, N. Y., as early as 1863 and '4, and one of the McCann heaters was found put up in a house occupied by my father in Skillman street, Brooklyn, as early as April, 1867.

R. D. Q. 166. I find in Defendants' Exhibit Liddle No. 1 the following language: "Previous to the adjustment of a stove within the fire-place the flue of the chimney should be closed with great care above the breast by throwing a horizontal floor across the same, pierced centrally for the admission of a smoke-pipe and pierced elsewhere, and the aperture governed by a valve if additional means of ventilation be required." Did you have any conversation with said Shepard as to whose language this was and to what it referred?

Objected to as not redirect examination and as calling for hearsay evidence.

A. I did; I understood from him that it was a quotation from the patent to E. Nott of October 25, 1832, and that it referred to the ordinary throat piece used in putting up fire-place heaters.

R. D. Q. 167. Did said Shepard tell you that he had limited the operation of the heater to the circulation of the hot air from its rear extended heating surface into the room in which it was placed?

Objected to as leading and as calling for hearsay evidence and assuming facts not proved.

A. He did not, but stated that he used the heated air to warm other apartments than that in which the heater was placed.

R. D. Q. 168. How does this quotation from the patent and the drawing in Exhibit Liddle No. 1 agree with each other in this respect of also allowing the heat to pass into the apartment above that in which the heater is placed?

Objected to as incompetent and as assuming as a fact that which is not proved.

442 A. Referring to the drawing, I do not find the horizontal floor thrown across the flue of the chimney for the purpose of confining the heated air to the lower room; the flue is shown unobstructed to a point above what appears to me to be the mantel shelf, and from the presence of the arrows upon said drawing I should say that the heated air was intended to pass upward to an exit above, otherwise it agrees with the language of the quotation substantially.

R. D. Q. 169. How is the heat let into the room in Defendants' Exhibit Budd No. 2?

A. Through openings in the frame at each side of the structure, the operation of the same being as follows: When the sliding valve in the top of the heater is closed the heated air is forced outward through these openings into the apartment in which the heater is placed.

R. D. Q. 170. Have you obtained the dates of the Thatcher *vs.* Merklee suit from the record itself? If so, please read it.

A. The following is a copy of the same:

1866.
August 22. Filed bill.
" " Issued sub.
" 25. Filed sub.
October 1. Entered appeal. T. P. Howe.
Nov. 19. Filed answer.
Dec. 1. Filed replica.
1867.
Feb. 27. Filed amended answer.
March 18. Filed testimony before A. A. Boyce.
April 17. Filed and entered final decree.

The witness adds: The foregoing dates I obtained upon examining the docket in the clerk's office.

R. D. Q. 171. Having now so refreshed your memory, will you state when Mr. Shepard showed you this fire-place heater you have referred to; at how early a date was it?

443 Objected to, as the witness has already testified fully as to this point and as not redirect.

A. It must have been in the fall of 1866.

R. D. Q. 172. How intimate were you with said Shepard at the time?

A. I was quite intimate with him; we were neighbors and in the habit of visiting each other, as our places of business were in the same street and block.

R. D. Q. 173. Did your intimacy have anything to do with his showing you these drawings, heaters, and other matters as you have testified?

Objected to as not redirect and as leading.

A. It did.

R. D. Q. 174. Was Mr. Shepard also acquainted with Mr. Thatcher in 1866, and were they friendly at about that time?

Objected to as not redirect and as leading.

A. He was acquainted with him. My impression is they were on friendly terms.

Recross by Wm. H. L. Lee, Esq.:

X Q. 175. Will you please look at the drawing on Defendants' Exhibit Liddle No. 1, and state what section or view it represents?

A. It represents a perspective view with the side wall of the front portion of the structure removed for the purpose of showing the interior and operation of the same.

X Q. 176. Is not the drawing peculiar in that it combines the different aspects of the heater which should properly be in independent drawings?

A. I do not think there is any peculiarity to be named about it. I think it is a common practice to represent structures in this
444 manner, and was done in this case as in other like cases to simplify the representation of the apparatus.

X Q. 177. You expressed the opinion just now, did you not, that it was a mongrel drawing? What did you mean by that?

A. Well, I meant it was just such a drawing as I described.

X Q. 178. In these recent questions you are aware I have been referring to the drawing in the centre of the page? Now, where in that drawing is there represented the thing which is represented in the drawing on the left?

A. The drawing on the left represents that portion of the more complete drawing, which is marked "flue," "flue," and the horizontal flue with its exit at the top of same.

X Q. 179. What is represented in that drawing by the space in which the lowest of all the arrows is placed?

A. The smoke-flue in the base of the structure for the passage of the products of combustion from the fire-pot or chamber of the structure to the rear extended flue surface.

X Q. 180. A little further to the left there is another arrow with an irregular line, thence leading up to the word flue. Does that represent the course of the products of combustion? The arrow to the left is very indistinct.

A. I see such irregular line, which, if it indicates anything, is intended to represent the course of the products of combustion as they rise from the base of flue into the ascending smoke-flue.

Adjourned to 8 p. m.

EIGHT O'CLOCK P. M.

Met pursuant to adjournment.

Present: Counsel as before.

445 X Q. 181. In the course of your examination you have stated a number of facts and circumstances by which you fixed the date when Mr. Shepard first showed you the alleged representation of the Saracenic heater, and subsequently you stated that you had examined the record of the suit of Thatcher *vs.* Merklee, by which you stated that you refreshed your memory as to the same. Please state if there are any other facts or circumstances by which you fix that date; and, if so, state the same fully and at large.

A. I think I have stated that it was during the earlier part of said litigation, whatever the date of same may have been, as shown by the record, which I find to be 1866, that Mr. Shepard exhibited to me the representation of the Saracenic heater, and also one of the said heaters, and that this was during the latter part or the fall of 1866; I don't remember that there were any other circumstances except those which I have stated in my testimony that fix this date.

X Q. 182. Will you please look upon the Defendants' Exhibit Brown No. 3, at that part thereof showing a cut called Saracenic parlor grate for dining-rooms, &c., and state whether I understand

correctly or not that the so-called Saracenic heater which Shepard showed you did not contain the frame of the heater exhibited in said cut?

A. I have so stated in my testimony.

X Q. 183. Did the so-called Saracenic grate that Shephard showed you contain anything above the said grate contained within the frame thereof above the level of the bottom of the urn as shown in said cut? And, if so, state fully what it did contain.

A. I have stated in my testimony there was no frame or urn attached to or placed upon the heater which I saw, and therefore nothing above the level of the bottom of the urn in the front or in the rear.

X Q. 184. Do you consider the drawing in the middle of the page on Defendants' Exhibit Liddle No. 1, as a practical working drawing, from which a practical manufacturer of heaters could construct a heater without any explanation further than is shown in said drawing itself, exclusive of any explanation thereof?

446 A. I do consider that the drawing is such a one as a practical working drawing could be made from for the manufacture of a practical working heater of the character I have testified, taking the drawing as a whole.

X Q. 185. Will you please look upon said drawing and state whether the smoke-flue in the base of the structure for the passage of the products of combustion from the fire-pot or chamber of the structure to the rear extended flue surface, as you have spoken of it in your answer to the X Q. 179, is or is not separated from the air space shown in said drawing in Defendants' Exhibit Liddle No. 1?

A. The said flue is shown below the air space, that portion of it which passes below the air space being closed by the top plate of the said flue for the purpose of preventing the passage of the products of combustion upward into said air space.

X Q. 186. The heavy horizontal pencil line in said figure represents the top plate of said flue, which prevents the passage of the products of combustion into said air space?

A. It represents the top line of said plate, looking at the side of the structure.

X Q. 187. Is it not true that in the structure that Shepard showed you the top surface in front of the castellated facing, as shown in the wood cut of the Saracenic parlor grate, was as shown in said wood cut, and that all to the rear of said top horizontal surface at the level of the bottom of the urn, shown in said wood cut, consisted of the horizontal plate forming the upper boundary of the horizontal rectangular flue, of which you have spoken as containing the products of combustion?

A. As I have before stated, the Saracenic heater which Mr. Shepard showed me contained no castellated frame above the level of the base of the urn, as shown in the wood cut referred to, but did contain the flue passages at the rear, as shown in the representation of Defendants' Exhibit Liddle No. 1, above the top plate of the base flue for the passage of the products of combustion.

Objected to as irresponsive.

447 X Q. 188. Can you not answer the last question directly, yes or no, and should not your answer be "yes?"

A. The top surface, as shown in the wood cut in front of the castellated frame, was, as I have before testified, shown in the heater which Mr. Shepard exhibited to me; that was not all that was shown at the rear of the said castellated frame in the heater which Mr. Shepard showed me, as I have before stated.

X Q. 189. Question 187 repeated.

A. I have answered the question; if the counsel will confine his question to the upper horizontal flue or the horizontal flue at the top of the rear ascending flues, then I will answer that I saw nothing above the top plate of said horizontal flue.

X Q. 190. The horizontal flue referred to in your last answer had its top plate or boundary in a horizontal plane indicated in the wood cut by the bottom of the urn?

A. It did substantially.

X Q. 191. Then all the lines indicated in the drawing on Defendants' Exhibit Liddle No. 1 were not in the structure that Shepard showed you?

A. No; the lines in the drawing which indicate the chimney breast, mantel shelf, and flues for heated air and smoke were not in the structure that Shepard showed me.

X Q. 192. I see that in the drawing in Exhibit Liddle No. 1 there are two air spaces. You understand, do you not, that the air space referred to in X Q. 185 and 186, and the answers thereto, is this air space to the right?

A. Yes.

ROBERT Z. LIDDLE.

Sworn to before me this February 19, 1880.

JOHN A. SHIELDS,
Examiner, &c.

448 NEW YORK *February 27th*, 1880.

Parties met pursuant to verbal notice.

Present: A. J. Todd, counsel for defendants; W. H. L. Lee, counsel for complainants.

HENRY O. ANDREWS, a witness duly sworn or behalf of defendants, deposes as follows:

Q. 1. What is your name, age, residence, and occupation?

A. My name is Henry O. Andrews; 71 years of age; I reside at Hempstead, Long Island; by occupation a farmer.

Q. 2. Were you ever employed by the firms of H. Nott & Co., Stratton & Seymour, and Shepard & Company?

A. Yes, sir.

Q. 3. From what year to what year?

A. I went to work there in 1832, and left there four years ago.

Q. 4. What was the name of the firm when you first went to work there?

A. H. Nott & Co.

Q. 5. Where was their place of business?

A. 242 Water street, New York city.

Q. 6. About when did it become Strottan & Seymour—that is, the firm of H. Nott & Co., or its business?

Objected to as assuming what is not proved.

A. I am not prepared to say as to what year.

Q. [7.] State about what year it was.

Same objection.

A. About the fall of 1845, or in that neighborhood.

449 Q. 8. What was the next change in the firm from Strotton & Seymour?

A. To Shepard & Co.

Q. 9. After that was it Shepard & Co. until the time you left 242 Water street?

A. Yes, sir.

Q. 10. What kind of business did Nott & Co. and its successors, Stratton & Seymour and Shepard & Co., carry on at 242 Water street?

A. Stove business.

Q. 11. Did they sell fire-place heaters?

A. Yes, sir.

Q. 12. What were such fire-place heaters called?

A. "Syphonic heaters."

Q. 13. Was there not also sold there heaters called "Saracenic" parlor grates or "Nott fire-place heaters?"

Objected to as leading, and the examination of this witness, as far as the same shows or tends to show prior knowledge, is objected to, because he is not named in the answer.

A. There were.

Q. 14. At how early a date were these Saracenic fire-place heaters sold at that establishment?

A. They were sold at that establishment in 1832; how long before I cannot tell.

Q. 15. Were they continued to be sold when the firm became Stratton & Seymour?

Objected to as leading.

A. Yes.

Q. 16. Were they also continued to be sold when the firm changed from Stratton & Seymour to Shepard & Co.?

Same objection.

450 A. Yes, sir.

Q. 17. Please describe the construction of this Saracenic or Nott fire-place heater as it was made and sold by the firms of H. Nott

& Co., Stratton & Seymour, and Shepard & Co., so far as the feeding arrangement of the heater—its rear heating surfaces—are concerned.

Objected to as assuming what has not been proven to exist.

A. The furnace part of this stove was made in two sections; the coal was poured in at the top, and when full and burning it was burnt off at the bottom; it passed up behind a brick, down a flue into a chamber in the rear of the furnace, and then turned and went up two flues to the top, and was connected with a box on the top; on the top of that box was a collar inserted to carry off the smoke and gas.

Q. 18. What did you state was connected with that collar on the top of the box?

A. A smoke-pipe.

Q. 19. What was the place called in which the fuel was fed into the fire-place heater?

A. It was called "a chamber of preparation."

Q. 20. Who put these heaters up—that is, set them in houses for use—which was sold by these firms mentioned?

A. I did.

Q. 21. State how the heat was utilized which was produced by the fire-place heaters which you so put in use?

A. It was conducted through the flue to the parlor or the next story or second floor; the heat was brought through the jamb through the register into the room.

Q. 22. Did this fire-place heater also serve to heat the room in which it was set as well as the apartment above that room?

Objected to as leading.

A. Yes; and gave general satisfaction.

Q. 23. State where the air got warmed which passed from the heater into the apartment above that in which it was placed.

451 Objected to as assuming what is not proved.

A. It gets warm in behind the heater.

Q. 24. When the register letting the heat into the apartment above would be closed what would become of the air heated at the rear of the heater?

A. It would come out into the basement.

Q. 25. Did the said fire-place heater project far enough into the room in which it was set to heat it even when the heat was passing from the rear of such heater through the register to the apartment above?

Objected to as leading.

A. I never heard of any complaints that they did not, and that they gave every satisfaction.

Q. 26. Did the chamber of preparation, as you call it, extend up to the top of the heater?

Objected to as leading.

A. Yes.

Q. 27. Where was the opening into it located, with respect to the mantel-piece?

A. Right under it.

Q. 28. When did you last see such a fire-place heater at 242 Water street, New York?

A. About five years ago; a year before I left there.

Q. 29. What became of that heater which you then saw?

A. I could not tell you.

Q. 30. Why; was it not there when you left the employ of Shepard & Co.?

Objected [to] as assuming what is not proved.

A. I can't say what became of it; whether it was broken or taken apart, I can't say.

Q. 31. Were there any iron patterns of such said fire-place heaters in *the* Shepard & Co.'s place of business at the time you left Shepard & Co.'s employment?

Objected to as leading.

452 A. Yes.

Q. 32. Did you see, between the years 1832 and 1850, any of these fire-place heaters which you have so described in operation in the city of New York heating the room in which they were set; also the apartment above?

Objected to as leading.

A. Yes.

Q. 33. Can you name some of the places in which you set such fire-place heaters in this and neighboring cities, between the years 1832 and 1850?

A. I can name the places, but I cannot say whether they are there now or not. I set one in Fourteenth street. I set one in Beekman street for Dr. Miller. I put two up in a house on the corner of Twenty-ninth street and Ninth avenue. I put up two in Tenth avenue. I think it was between Twenty-second and Twenty-third streets. I put up one in Bond street. I can't recollect where I put them all up, I put up so many. I did not keep any memorandum.

Q. 34. After the firm of Shepard & Co. ceased to sell and put in these heaters, did said Shepard & Co. repair the same, or furnish repairs for the same?

A. Both.

Q. 35. Who did the repairs on such heaters?

A. I done the most of it.

Q. 36. Up to within what time were repairs done to these heaters—that is, how long ago is it since repairs ceased to be furnished for them?

A. They were furnished up to the time I left there, if they were called for.

Q. 37. How do you fix it as the year 1832 when you first went into the employment of the then manufacturers of this fire-place heater at 242 Water street?

A. It was the year of the first cholera; that was in the year 1832.

Q. 38. Was Charles J. Shepard in the employment of H. Nott & Co. at or about that time; if so, in what capacity?

453 A. I think it was two years afterwards; he came in as clerk.

Q. 39. Did he continue there at 242 Water street; and, if so, for what length of time?

A. He continued there until the firm changed; then it became Shepard & Co.

Q. 40. How long did he then continue at 242 Water street?

A. Until he died.

Q. 41. Who was Charles J. Shepard's partner?

A. A brother—Thomas.

Q. 42. Please look at the circular now shown you, marked "Exhibit Brown No. 3," and state if you recognize it.

A. Yes, sir; it looks quite natural.

Q. 43. About how many years ago did you see similar circulars to it?

A. Directly after Shepard came into the firm.

Q. 44. Can you point out an illustration on that circular of the front portion of the Saracenic heater which you have described and referred to?

Objected to as leading.

A. I think I can.

Q. 45. Please to do so.

A. This is furnace part; this is the preparation chamber; it is marked "Saracenic parlor grate for dining-rooms," &c.

Q. 46. Do you see on any other wood cut a similar illustration, only smaller; if so, indicate it?

A. Yes, sir; my initials are placed above and below said wood cut.

Q. 47. Do said illustrations show the extended heating surface which you say was at the rear of said fire-place heater?

Objected to as leading, and assuming that the witness has said what he has not said, and the counsel for the complainant
454 protests against the question as an attempt to prompt the witness.

A. No, they do not.

Q. 48. Please look at the drawing now shown you, marked "Defendants' Exhibit Liddle No. 1," and state if you find in it extended heating service at the rear.

Objected to as leading.

A. I can't say that that represents it.

Q. 49. Please examine said drawing more closely and state if you do not find therein two passages for the products of combustion from a

lower horizontal flue up to an upper horizontal flue and a place on the top of such upper horizontal flue for the smoke-pipe to rest upon.

Objected to as leading.

A. Yes, I see what is meant to represent the heater (it is a very poor drawing); when we look into it we can see what the design of it is.

Q. 50. Please look at the model now shown you, marked "Defendants' Exhibit Brown No. 3," and state if that substantially represents the fire-place heaters which were sold at 242 Water street, by H. Nott & Co., Stratton & Seymour, and Shepard & Co., between the years 1832 and 1850, so far as the top feeding of the fuel into a chamber of preparation in front of the mantel and rear extended heating service at the rear of the mantel and connected with said heater are concerned.

Objected to as leading.

Counsel for complainants also inquires whether a portion of the model, as the same was originally offered in evidence, is not now missing.

Counsel for defendant says that the duplicate of the part
455 now marked by the examiner "side piece" appears to have strayed away, but that B. F. Lee was aware of it the other day, and as one portion was here still the matter was then deemed of no consequence.

Counsel for complainants desires that the whole exhibit as offered in evidence be produced and shown to the witness.

Defendants' counsel says that the part referred to is not in the question, and that the witness, if it were, could easily see from this one side piece what was on the other side of the heater.

Counsel for complainants desires that the missing portion of the exhibit be produced as speedily as possible, and request defendants to have it at the next session.

Defendants' counsel will do so with great pleasure if such piece can be found, and he will have diligent search made for it.

A. This is made to represent where the coal is put in (the witness put his hand at the top of the oblong opening); when this is filled with coal it burns off at the base into this partition here; it burns up here, and down into this back flue into this base, and then passes up through these two pipes (there is one pipe too many here), and comes up here to the smoke-pipe.

Adjourned, by consent, until 10 a. m. Saturday, February 28th, 1880.

456 NEW YORK, *February 28th*, 1880.

Parties met pursuant to adjournment.

Present: Counsel as of previous day.

Q. 51. Please answer more fully the second branch of the last question.

(Examiner reads said second branch of last question to witness.)

Same objections.

A. This represents the heating part of the furnace. This stands in the chimney—this part of it. The heat that is made by this part of the furnace is conveyed upstairs.

Q. 52. How do these flues which are shown at the rear of this model, "Defendants' Exhibit Brown No. 2," compare with or differ from the Saracenic fire-place heaters, which you have referred to as sold by Shepard & Co., and others preceding such firm?

A. The burning part corresponds with the heater, with the exception of the three flues here. Saracenic has but two back flues; this has three.

Q. 53. Had the Saracenic the horizontal base flue and the horizontal upper flue shown in the model, between which were placed the vertical flues?

Objected to as leading.

A. I do not know exactly what you mean.

Q. 54. I mean to refer you to the bottom horizontal flue, into which the products of combustion pass before they pass into the vertical flues; also, to refer you to the upper horizontal flue, into which the products of combustion pass from such vertical flues and before they pass away into the smoke-chimney. How do such two rear horizontal flues compare with the Saracenic heater's rear flues?

457 A. As far as this is concerned it represents the Saracenic heater. The flames pass into this bottom flue (we called it plinth) and then passed up those two tubes into the top reservoir which was connected with the smoke-pipe, and from there passed out to the chimney.

Q. 55. Did this top reservoir or horizontal flue come quite up to the back of the stove part of the heater, as shown in this tin model?

Objected to as leading.

A. It did.

Q. 56. Does the model show any connection between the top of the chamber of preparation and this upper horizontal flue; was there a passage from the upper part of the chamber of preparation back to this rear horizontal flue in that Saracenic fire-place heater?

Objected to as leading.

A. No; it does not. There was such a passage.

Q. 57. I asked you in question No. 33 whether said Saracenic heaters had been put up in neighboring cities to New York. Please state in what, if any, other cities other to New York.

Same objection as to question No. 33.

A. Yes; they were put up in Newark, N. J., and they were put up up the North river. They were put up in Brooklyn and in several neighboring cities.

Q. 58. Is "Thomas," the brother of Charles J. Shepard, living?

A. No, sir.

Q. 59. What was Charles J. Shepard's duties as clerk in Nott & Co.'s and Stratton & Seymour's time; did he act as salesman for them?

Objected to as leading.

458 A. He collected bills for them and acted as clerk for them.

Q. 60. Had he (Charles J. Shepard) knowledge during the existence of Nott & Co. and Stratton & Seymour of such Saracenic fire-place heaters having been sold from that establishment, 242 Water street, to be put up by you for use in the city of New York and elsewhere in the United States?

Objected to as leading.

A. I can't answer that question whether he was or not.

Q. 61. Did he not have knowledge of the sale of these Saracenic fire-place heaters while he was himself a member of the firm of Shepard & Co.?

Objected to as leading and as already answered.

A. Well, I presume he did, but I cannot tell. It was not in my part of the business of knowing what he knew about it.

Q. 62. You stated that you were not prepared to state what year the firm changed from Nott & Co. to Stratton & Seymour, but that you thought it was in the fall of 1845; are you positive that this first change in the business was at so late a period as 1845?

Objected to as leading and as already answered.

A. No, sir; I am not positive; I could not state dates.

Q. 63. Who composed the firm of H. Nott & Co.?

A. Dr. Nott and his son.

Q. 64. What was that son's name?

A. Benjamin.

Q. 65. Had he any son or sons in the business in any other city about that time?

459 A. He had; in England; I don't know in what locality in England or the son's Christian name.

Q. 66. Were these Saracenic fire-place heaters or any of them sent to that son in the stove business in England during the time of H. Nott & Co.?

Objected to as leading.

A. Not to my knowledge.

Q. 67. Did you know or hear that this son in England was selling the "Nott stove and fire-place heater" for H. Nott & Co., in England?

Objected to as leading and as calling for hearsay evidence.

A. I did hear of it.

Q. 68. You referred, *to* in your answer to 12th question, to another heater called the "syphonic heater;" was that heater commenced to be sold at as early a period as the Saracenic fire-place heater?

Objected to as leading.

A. It was not.

Q. 69. What structure or contrivance was attached to the stove or front portion of the Saracenic fire-place heater in order to separate the part of the heater which projected into the room from the part of the heater contained in the fire-place for the heating of the air to be passed to the apartment overhead, and how did such contrivance compare with or differ from the contrivance shown on the tin model as separating such portions?

Objected to as assuming what has not been proved.

A. There was no contrivance as regards to the back; these wings separated the heat from the back flue, the heat that was made in the front; that was in the basement or the room that the heater was set in.

460 Q. 70. Besides the wings on the heater to separate the heater into the two divisions, was there not also the top piece between these two wings, which is marked "A" in the model?

Objected to as leading.

A. Yes, sir.

Q. 71. State how, on the Saracenic fire-place heater, these two wings and top piece were attached or fastened to the heater.

A. They were fastened by a key to drop in behind them.

Q. 72. In what way did the heat pass through this frame into the room into which this heater projected, when the register was shut upstairs, so as to prevent it passing into the room upstairs?

Objected [to] as assuming what is not proved.

A. Those wings were perforated, so that when the chimney became full and the register shut it would come out through these perforated holes.

Cross-examined by Mr. W. H. L. LEE:

X Q. 73. You have testified that the firm of H. Nott & Co. became Stratton & Seymour about the fall of 1845. Please state how long the firm continued to be Stratton & Seymour and when it became Shepard & Co.

A. I could not positively say about the date and how long Stratton & Seymour continued in the business.

X Q. 74. Answer the last question as accurately as you can.

A. I can't tell; I do not know the year or date.

X Q. 75. Can you tell whether or not the firm of Stratton & Seymour existed for as long a time as ten years?

A. I cannot positively say.

461 X Q. 76. Can you tell whether or not the firm of Stratton & Seymour existed for as long a period as twenty years?

A. I could not say anything about it.

X Q. 77. Can you tell whether or not the firm of Stratton & Seymour existed for as long a period as thirty years?

A. No, sir; I could not.

X Q. 78. Were you in their employ during the entire period of the existence of the firm of Stratton & Seymour?

A. I was.

X Q. 79. You have testified that Charles J. Shepard is dead. How do you know this?

A. I have no other way to know but to see a man stretched in his coffin. I suppose he was dead; that is the way I judge it.

X Q. 80. When did he die?

A. I cannot say; between four and five years ago.

X Q. 81. Do you know his sister, Miss Eliza M. Shepard?

A. I have seen her frequently, but have no acquaintance with her.

X Q. 82. Were your relations with Charles J. Shepard of a friendly and intimate character at the time of his death and for some years before?

A. They were and always were.

X Q. 83. You have stated that at the time you left Shepard & Co. there were iron patterns of the Saracenic fire-place heater in their place of business. What has become of them?

A. I don't know. They were there when I left, and I presume they are there yet.

X Q. 84. Have you been there since you knew you were to be examined in this case to see whether or not they were there?

A. I have not, sir.

X Q. 85. If they were still in the store formerly of Shepard & Co., at No. 242 Water street, do you think you could find them and recognize them?

A. I do.

462 X Q. 86. Have you made any effort whatever to find said patterns?

Objected to as decidedly improper, because the cross-examining counsel is aware of the fact that no one is permitted to make an examination of those premises without the authority of the executrix (Eliza M. Shepard); that, so far as at present appears, such authority cannot be obtained; that a *subpœna duces tecum* has been issued to reach said patterns, and that one witness, who is still employed on those premises, viz., one "Hassen," has stated that he is not able or willing to search for said patterns without first obtaining permission of Miss Shepard, and he has not been able to get it.

Counsel therefore suggests that this question be withdrawn.

Counsel for complainants calls the attention of the court to the fact that the witness Hassen has testified that he did not dare to ask such permission of Miss Shepard for fear she would regard it as a liberty, and might lose his place; also that Miss Eliza M. Shepard has testified that she has personally made a thorough search for such patterns.

Counsel for complainants denies that he is aware that authority to make such search could not be obtained from Miss Shepard if permission were properly asked.

Defendants' counsel states that Miss Shepard was only instructed

to look for the heater itself; and "Hassen" testified that she could not recognize the pattern was she to see them. The question is therefore objected to as immaterial.

463 Counsel for complainants calls attention to question 117, and the answer thereto, in the examination of Miss Eliza M. Shepard, where she testifies that she made the same search for the patterns as for the heaters.

Attention is also called to the testimony of "Hassen" in this connection.

Defendants' counsel replies that if complainants' counsel will more critically examine the testimony referred to he will see that Miss Shepard was only interrogated as to "wooden" patterns, not as to "iron" patterns. It is to be hoped that this reply is sufficient and conclusive as to this controversy.

Complainants' counsel refers to the question itself to show that it related to patterns generally, and was not limited as suggested.

Defendants' counsel refers complainants' counsel to preceding, and succeeding interrogatories go to show that the word "patterns" was limited to wooden patterns.

A. I have not.

Counsel for complainants gives notice that on the hearing he will move to strike out the testimony of this witness on the ground that it is secondary, the patterns themselves being the best evidence, and also because the witness has not used all possible means to refresh his memory.

Cross-examination resumed, reserving all objections:

X Q. 87. Will you please describe the "syphonic" heater, which you state was sold by Nott & Co., at 242 Water street?

464 A. The syphonic heater was a square front, and ran back about the same distance as the "Saracenic." On the back of this heater there was a projection which run up into the flue about eighteen inches. This flue was about eight inches wide, and ran the whole width of the furnace. In this was connected sheet-iron pipes, which were considered the heating apparatus, the fire burning right up through them.

X Q. 88. Did the syphonic heaters have a top-feeding magazine?

A. I am not prepared to answer that question, as I have now forgotten.

X Q. 89. Please state how, in the syphonic heater, the air was heated, what was its course, and what did it serve to heat.

A. From the fire that passed through the rear of the heater. Its course was up the flue. It served to heat the room in which it was let into.

X Q. 90. Is that as full and as clear a description of that syphonic heater and of its functions as you can give?

A. I think it is.

X Q. 91. If you remember any details of the construction, functions, and operation of the syphonic heater, except what you have already given, please state the same fully and at large.

A. I don't know of any but what I have explained.

X Q. 92. Returning to the Saracenic heater, please state where and when you last saw one of them.

A. I don't know that I can answer that question; I can't. It is a good many years since I had anything to do with them.

X Q. 93. Is it ten years since you last saw a Saracenic heater?

A. I think it is all of that.

X Q. 94. Was it as long ago as twenty years since you last saw a Saracenic heater?

A. No; I don't think it is.

X Q. 95. When did you last see a syphonic heater?

A. Well, I saw them just before I left them.

465 X Q. 96. Were you constantly in the habit of seeing the syphonic heater up to the time you left Shepard & Co.?

A. Yes, sir; I was, if there was anything to be done to them.

X Q. 97. In question No. 28 you were asked: "When did you last see such a fire-place heater at 242 Water street, New York?" and you answered, "About five years ago." Did you mean the Saracenic heater or the syphonic heater?

A. Syphonic.

X Q. 98. Will you please read questions 28, 29, 30, 31, 32, and 33 and the answers thereto, and state whether the same refer to the syphonic or the Saracenic heater.

A. Those refer to the Saracenic.

X Q. 99. Will you please read over the last two questions and state which of the two answers you have given is correct.

Objected to as improper and uncalled for in view of the witness' last answer to counsel's question.

A. There is a mistake there. I referred to the "syphonic" and not the Saracenic.

Defendants' counsel objects to the answer, because of the misleading character of the question, and as the last question was evidently put with the intention of getting witness to answer before he had time for reflection, and as it does not now appear from this answer which of the answers to the two previous questions is erroneous or the witness mistaken in.

Counsel for the complainants now desires to state that one reason why he framed X Q. 99 as he did was because he understood the witness in answering X Q. 98 to say, "Those refer to the sy-

466 phonic," and not, as the examiner took it down, "Those refer to the Saracenic."

Defendants' counsel replies that he distinctly heard the witness state "Saracenic," that he was sitting right at the side, and that the direct questions 28 to 32, referred to in X Q. 92, directly refer to the Saracenic, which bears out both this statement and the witness' answer, and that counsel looks upon the course pursued as an unfair attempt to endeavor to trip up a fair witness by for the moment getting him confused, and which arose mainly from the complainants' counsel's failure to refer the witness to a sufficient number of

his direct answers in putting of the X Q. 97th question; hence the confusion in the witness' answer.

Adjourned by consent of counsel to March 1st, at 10.30 a. m.

NEW YORK, *March 1st*, 1880.

Parties met pursuant to adjournment of February 28th.
Present: Counsel as before.

X Q. 100. Will you please state how far the fire-place heater about which you have testified, known as the "syphonic," set back into the space under the mantel?

Objected to as nothing was asked about the "syphonic" on the direct examination.

A. It set back about nine inches, I think, behind the face which came up right under the jam of the mantel.

467 X Q. 101. How much of said syphonic heater was out in the room?

Same objection.

A. Well, I should say about eight or nine inches.

X Q. 102. Were any of the syphonic heaters which you put up actually used, to your knowledge, for heating both the room in which that was set and the room above?

A. I never saw them in operation, but what I put up myself.

X Q. 103. How many syphonic heaters did you ever put up yourself?

A. I could not say how many—a great many of them.

X Q. 104. How many Saracenic heaters did you ever put up yourself?

A. I can't answer that question. I kept no memorandum.

X Q. 105. Are you willing, positively, to swear that you ever saw a Saracenic heater in actual operation, burning fuel?

A. I am.

X Q. 106. Please state when and where you last saw a "Saracenic" heater in actual operation, buring fuel.

A. I could not state. I saw one in operation in 10th avenue, and in a number of places, but I cannot remember. I can't remember the places.

X Q. 107. In your answer to X Q. 87 you gave a description of the syphonic heater: are you as sure of the correctness of that answer as you are of anything else to which you have testified?

(The examiner reads the Q. and A. to witness.)

Objected to as indefinite and as not inquiring into facts.

A. I am.

468 X Q. 108. Will you please look upon the Exhibit "Brown No. 1," and state wherein it resembles and wherein it differs from the "syphonic" heater in its construction?

Objected to as immaterial and improper, and as not in X examition, this witness not having been referred to "Exhibit Brown No.

1," and as the witness, Brown, himself having stated that the tin man had made mistakes in making this model No. 1, he in consequence thereof substituted "No. 2" in its place.

Complainants' counsel protests against the form of the objection as desiring to prompt the witness.

Defendants' counsel denies the charge and believes the complainants' counsel knows better.

A. Well, it differs very materially; the syphonic heater burns off at each side, the Saracenic burns off at the centre; the syphonic burns off directly to these flues of the heating apparatus; the Saracenic burns down, passes off into a back chamber, then up two flues to the pipe. The Saracenic *grate* has a round grate, about two-thirds round, and the other has a flat one; I don't know that they differ more than that.

Answer objected to by complainants' counsel as irresponsive.

X Q. 109. You mistake the question; I did not ask you about the Saracenic heater; I wanted you to compare the model and the syphonic heater; please do so.

A. Well, it is a very imperfect model; I don't think that this gives the true character or a true drawing of the syphonic heater. In the first place, it does not show in the front here the way which the fire passes off; I don't think it is a very good model.

X Q. 110. Do I correctly understand that the principal difference between the model, "Brown No. 1," and the syphonic heater
469 is that the syphonic burns off directly to the flues of the heating apparatus, and that the syphonic has a flat grate?

A. Yes.

X Q. 111. Will you please inspect the model; and, if you discover any other differences, state them.

A. I don't see any other difference in it.

X Q. 112. Now, returning to the Saracenic heater, please compare its construction with that shown in the model, Exhibit Brown No. 1," and state wherein they resemble and wherein they differ.

A. Well, it differs very materially; the Saracenic heater has a projection on the back here, and this has none; where the fire burns down, and then off into this back chamber, and then up through those two flues, this is intended to burn direct up; that is the difference between the two heaters—quite a difference—that is, between the tin model "Brown No. 1" and the Saracenic heater.

X Q. 113. Then, do I correctly understand that there is no other differences of construction between the Saracenic and the model?

A. I don't see any other differences except the grate; this grate in the model is only about half round while that in the Saracenic is about two-thirds round.

X Q. 114. You spoke of putting up a heater in a house — corner of Twentieth street and Ninth avenue; which corner was it?

A. The southeast corner; I won't be positive whether it was corner of Nineteenth or Twentieth street.

X Q. 115. Do you remember the name of the person for whom you put it up?

A. His name was Howell.

X Q. 116. Where was the heater placed?

A. It was on the first floor.

X Q. 117. Were not the syphonic and the Saracenic heaters made under patents of Dr. Nott?

A. The Saracenic must have been patented in 1831 or 1832; the syphonic heaters were never patented by them.

X Q. 118. Was the Saracenic patented by Dr. Nott?

470 A. It was.

X Q. 119. How many sizes of Saracenic heaters were there?

A. Two.

X Q. 120. Give the dimensions of each size?

A. I don't know that I can give the exact dimensions. The largest ones were about 16 inches across the front; the other a little over a foot. They both stood one height and were both of a depth.

X Q. 121. Do you remember how long the register opening was in the house where you put up the heater for Mr. Howell?

A. I cannot say positively, but I should say a little over two foot; it was set in the jamb.

X Q. 122. How wide was it?

A. About 8 inches.

X Q. 123. You understand, do you not, that I mean the opening in the room above?

A. Yes, sir; I understand; to let the heat out into the room.

X Q. 124. What was placed upon the register opening?

A. Wire-work.

X Q. 125. Was it a horizontal or perpendicular opening?

A. It was perpendicular in the jamb.

X Q. 126. Describe the wire-work.

A. It was made in small diamonds.

X Q. 127. How is it that you happen to remember all these details?

A. Well, I can remember things that I done in my youth better than I can in my old age.

X Q. 128. Is there anything that would cause you to remember the construction of the Saracenic heater more than the construction of any of the other articles that you have handled?

A. I don't know that there is, with the exception of having more to do with them—putting them together and putting them up.

471 X Q. 129. Were not the Saracenic heaters sometimes put up by you and so arranged as to heat only the room in which they were placed?

A. They were.

X Q. 130. Do you not think that by the exercise of a little trouble you could procure a sample of the old Saracenic heater?

A. I don't think I could, as I am now situated.

X Q. 131. For any one living in New York city, do you not think that a sample of the heater could be found?

A. I think probably it could.

X Q. 132. Are you sure there were only two sizes of the Saracenic heater?

A. Yes.

X Q. 133. Will you please look at the drawing marked "Liddle No. 1," and state what that part of the drawing in which the lowest arrow is situated is intended to represent?

A. It is intended to represent the base which the heat passes through.

X Q. 134. Do you mean by "heat" the products of combustion or the heated air?

A. The products of combustion which burn round there.

X Q. 135. How is this base through which the products of combustion pass separated from the air space shown in the centre of the diagram?

A. It passes beyond the space; those flues set on the back part of the heater.

X Q. 136. (Question repeated.)

A. The two plates—this one runs down into the base, and runs to the back of those pipes which convey the smoke and gas, and the two plates are far enough apart to let air pass between them.

X Q. 137. Is the plate represented by the heavy black line directly above the lowest arrow?

A. Yes.

X Q. 138. And this black line is about equally heavy underneath the air space and underneath the section marked flue?

472 Objected to, as drawing speaks for itself, and, as to any little inaccuracy in the line, as immaterial.

A. Yes, it is.

X Q. 139. Will you please state what changes were made in the construction of the Saracenic heater during the period you knew anything about them.

A. None at all.

X Q. 140. You have spoken of holes in the wings of the frame of the Saracenic heater. These holes were always open, were they not?

A. Yes.

X Q. 141. Will you please state how large those holes were and how far apart?

A. I think they were about three inches in diameter, and they were placed something like a register. Those pieces were filled in; they had bars across them, and were cast solid to the plate, and they were about eight inches apart.

X Q. 142. How many holes in the wings and in the lintel or top piece were there?

Objected to, as the witness has not stated that there were any in the lintel or top piece.

A. I could not say.

X Q. 143. Were there as many as twenty?

A. No, sir.

X Q. 144. Can you not give me some idea how many there were? Speak as nearly as you can.

A. I don't think there were above eight in both wings; about four in a wing.

X Q. 145. What was the size, shape, and material of which the flues of the Saracenic heater were composed of?

A. Composed of cast iron. I should think they were about 4 x 6 inches, and the shape nearly square.

X Q. 146. How far did the Saracenic heater project from the mantel into the room?

473 A. I could not say positive; I should say from 8 to 10 inches.

X Q. 147. What was the trade name by which the Saracenic heater was known?

A. Basement heater.

X Q. 148. Was it not also known by the name of Nott's grate?

A. Yes.

Redirect examination:

R. D. Q. 149. Having reference to your explanation of the way the fire burned off out of the syphonic heater into the side flues thereof, as stated in your answer to X Q. 108, will you please state whether the fuel was fed into that syphonic heater in the same manner in which it is shown as fed into the heater represented by the tin model "Brown No. 1?"

A. No, sir; the syphonic heater was fed from the front.

R. D. Q. 150. Did you ever read or see the Dr. Nott patents?

A. I did not.

R. D. Q. 151. Was there any other fire-place heater made under the Dr. Nott patents than that that was called the Saracenic?

A. Yes; there were.

R. D. Q. 152. What was the name of it?

A. "Buttress."

R. D. Q. 153. At how early a date was the "Buttress" sold and for what length of time?

A. I could not say at how early a date or for what length of time.

R. D. Q. 154. How did it differ, if at all, from the Saracenic fire-place heater?

A. I don't think it differed any in the principal; was about all one thing, with the exception of the back flues. There were three on that and only two on the others.

R. D. Q. 155. Then, in respect to the back flues, the "Buttress" was more nearly alike [the] "Brown No. 2" than the Saracenic was?

474 A. Yes, sir.

R. D. Q. 156. How did it compare in size (the Buttress) with the "Saracenic," two sizes?

A. Large—a great deal larger than the Saracenic; they were the same height, but spread off in width.

R. D. Q. 157. You have stated that the two sizes of the Saracenic

heaters were, one about sixteen inches and one about a little over a foot across the front. Do you mean including or excluding the two wings of the heater?

A. Well, I won't be positive about the width of those heaters. I did not include the wings because they were disconnected from the heaters. They may be a little wider than what I said, but I would not be positive.

R. D. Q. 158. Was the syphonic heater sold at the same time that the Saracenic heater was?

A. No, it was not.

R. D. Q. 159. When was the syphonic heater sold with reference to the sale—I mean of the Saracenic heater?

A. I don't think the syphonic was sold for thirty years after I went there. I can't say definitely when.

R. D. Q. 160. Did the syphonic commence to be sold before the sale of the Saracenic had ceased?

A. No, it did not; that commenced afterwards.

R. D. Q. 161. About how long had the sale of the Saracenic ceased when the sale of the syphonic heater commenced?

A. I could not answer that—a long while.

R. D. Q. 162. Do you believe any syphonic heaters were sold prior to the year 1860?

A. I think there was.

R. D. Q. 163. Do you think that they were sold a great while before that year—I refer to the syphonic?

A. I should think between the years 1840 and 1850, along about there.

R. D. Q. 164. You have stated that some of the Saracenic fire-place heaters were put up only to heat the room in which they were set; in which way were they more frequently put in, to heat that room only, or to heat the room above as well?

475 A. To heat that room only in which they were set in.

R. D. Q. 165. To what extent about; were more set in that way than in the other?

A. About two to one.

R. D. Q. 166. You have referred to the making of the register opening in the second story for these Saracenic fire-place heaters a little over two foot long by a little over eight inches wide; why was the register opening so large?

A. Because we had to connect the pipe with the heater below—the smoke-pipe.

R. D. Q. 167. You have stated in answer to X. Q. 100 that the syphonic heater set back into the fire-place about nine inches, and you stated in answer to X. Q. 87 "that the syphonic and the Saracenic ran back about the same distance;" now do you mean to testify that the Saracenic only ran back about nine inches into the mantel frame?

A. Well, I may have been mistaken as to the depth of that; I could not tell exactly.

R. D. Q. 168. The flues on the syphonic being at the side, as you testify, and the flues of the Saracenic being at the rear, do you not

mean to testify that the Saracenic was much deeper at the rear than the syphonic?

Objected to as leading.

A. Yes, it was much deeper.

R. D. Q. 169. You were asked in X. Q. 97 whether the heater you referred to in direct Q. 28 as having been seen for the last time about five years ago was the Saracenic or the syphonic, and you answered the "syphonic." Now answer, as matter of fact, when you last saw a Saracenic fire-place heater at No. 242 Water street?

A. I think it is between five and six years ago; I had my eye fixed upon this heater, although I called it by another name.

R. D. Q. 170. While you were giving your answer to that
476 question yesterday, "X. Q. 97," also the following questions up to the adjournment, was your mind unsettled or your attention disturbed by any anxiety on your part?

A. My mind at that time was a good many miles from here for fear that I would not get home; my mind was greatly distressed. I was afraid that I would not catch my train.

R. D. Q. 171. You have been referred in X Q. 138 to a pencil line which extends underneath the parts which are marked on drawing "Liddle No. 1," "air space and flue." Notwithstanding this, would it or not be understood that there was an opening from the plinth or lower flue containing the arrow up into the flue marked "flue."

A. Yes, there was an opening there which carries the smoke and flame down into this bottom plinth and then passes to the two back pipes marked "flue."

R. D. Q. 172. (Question repeated).

A. Yes, I should think so.

R. D. Q. 173. You stated in your answer to X. Q No. 131 that any one living in New York could probably get a sample of the Saracenic heaters; on what belief was that question answered?

A. Well, I do not know why I should state such a thing as that, because there are so many in New York who would not know it if they saw it. I had reference to any one who worked in the establishment at 242 Water street.

R. D. Q. 174. Do you believe it would be an easy matter to find one of these old Saracenic fire-place heaters in the city of New York; if so, on what is such belief based?

A. I think it would probably be a very difficult thing to find one, yet it might be found; I could not say, because they have gone out of date, and are probably all destroyed.

R. D. Q. 175. Are you positive that the Saracenic fire-place heater, as made and sold by H. Nott & Co., Stratton & Seymour, Shepard & Co., was fed in directly at the top, and in front of the man-
477 tel, and burned off at the base, substantially as illustrated by the "Brown Model No. 2" and the drawing "Liddle No. 1."

Objected to leading and already answered.

A. Yes.

R. D. Q. 176. Same question asked the witness as to the rear heating surface shown on the model and the drawing.

Same objection.

A. Yes.

Recross:

R. X Q. 177. Will you please state your reason for saying that it would be understood from the drawing, Exhibit Liddle No. 1, that there was an opening from the plinth containing the lowest arrow into the flue?

A. Because this plate sets on the top of this plate, which has a hole through it, and the draught goes down into this plinth and passes back into these two holes in the rear which set over these holes, and the smoke and gas passes through them into the chamber above, and then direct into the smoke-pipe.

R. X Q. 178. Do you mean to say that everything you have spoken of in your last answer is indicated in the drawing "Liddle No. 1."

A. I think it is, as far as I can make out the drawing.

R. X Q. 179. Considering your friendly relations with the late Charles J. Shepard and your acquaintance with his executrix (Miss Eliza M. Shepard), do you not believe it was within your power to obtain permission from her to look for the patterns of the Saracenic heater in her establishment, No. 242 Water street, before you were examined here?

Objected to as immaterial and as the counsel well knows a communication was addressed to Mrs. Shepard for leave that "Hassen make search," which was denied.

478 A. No, sir; I do not believe it was possible for me to get consent.

R. D. Q. 180. Why not?

A. Because she is an old maid and very hard to be satisfied.

Re-redirect:

R. R. D. Q. 181. Is Miss Shepard different in disposition from what her brother was in his lifetime?

A. Yes; very different.

HENRY O. ANDREWS.

Sworn to before me this 1st day of March, 1880.

JOHN A. SHIELDS, *Examiner.*

Adjourned by consent to Wednesday, March 3d, 1880, at 9.30 a. m.

NEW YORK, *March* 3, 1880.

Parties met pursuant to adjournment of March 1st, 1880.
Present: Counsel as before.

MICHAEL P. LOW, a witness, being duly sworn on behalf of the defendants, testifies as follows:

Counsel for complainants reserves all objections, and the examination was thereupon proceeded with.

Q. 1. What is your name, age, residence, and occupation?
A. Michael P. Low; sixty-five years of age; residence, city of New York; by occupation a mechanic.
479 Q. 2. Were you ever in the stove business; if so, from what year to what year were you engaged therein?
A. I was a clerk in the stove business at 264 Water street in 1831 up to 1832; then I opened business in Water street in 1838 for myself, and continued there until 1852.
Q. 3. With whom, in Water street, were you clerk in 1831?
A. John W. James.
Q. 4. Do you recollect the firm of H. Nott & Co.; if so, where were they in Water street at that time?
A. I do; they were at 235 Water street?
Q. 5. How long did they continue in business, and did any one succeed them in business?
A. They continued until 1837 and were succeeded by Stratton & Seymour.
Q. 6. How long did the firm of Stratton & Seymour continue in the stove business, and at what number and street?
A. Stratton & Seymour continued until the latter part of 1841 or the early part of 1842 at 242 Water street.
Q. 7. What firm, if any, succeeded to the business of Stratton & Seymour?
A. Shepard & Co., at the same place?
Q. 8. Where was your place or places of business in Water street between the years 1838 and 1852?
A. At first 265 Water and the latter part of the time at 238 Water street.
Q. 9. Between what years were you at 238 Water street?
A. From 1847 to 1852.
Q. 10. How near were you to Shepard & Co.'s place of business from 1847 to 1852?
A. About twenty-five feet—one lot.
Q. 11. Did you have knowledge of the said Shepard & Co., also the firms which preceded it, namely, Stratton & Seymour and H. Nott & Co., having sold fire-place heaters?
480 A. I have knowledge of the two latter firms—that is, Stratton & Seymour and Shepard & Co.—having sold fire-place heaters.
Q. 12. Will you please to describe generally such fire-place heaters?

Question objected to as far as it tends to show prior knowledge on the part of this witness, he not being named in the answer.

Defendants' counsel calls the witness to prove knowledge of such fire-place heaters in the firm of Shepard & Co., Charles J. Shepard, one of the members of that firm, and in the firm of Stratton & Seymour, the predecessor of Shepard & Co.

A. The heater that I had reference to that they had for sale in those years was a flat front projecting in front of a grate frame which surrounded the heater which filled the space between the heater and the joints of the chimney. The fire-chamber was divided in two parts by a vertical partition from the top down to within a short space of the grate. The front portion of the interior contained fuel which was fed in from the top, and the back space formed a flue through which the products of combustion passed upward to near the top, then out back into a chamber; thence downward to a horizontal cross-pipe or chamber; thence upward through two pipes, one at each end of this horizontal chamber or flue at the bottom and connecting at the top with another chamber, on the top of which was the exit or smoke pipe.

Q. 13. You state that you were within a door of Shepard & Co.'s place of business from the years 1847 to 1852. Who were the members of the firm in those years, and how well were you acquainted with the members of said firm during those years?

A. Charles J. Shepard and Thomas M. Shepard were the members of that firm. We were very friendly and intimately acquainted as business neighbors.

Q. 14. Had Charles J. Shepard during those years a knowl-
481 edge as a member of that firm of the sale and use within the city of New York of fire-place heaters such as you have described?

Objected to as leading.

A. He used to speak of the sale of them.

Q. 15. Do you mean of the sale of them within that period of time?

A. I couldn't say that he specified any particular time.

Q. 16. Did the firm of which he was a member sell such fire-place heaters within the period of time you have mentioned, namely, between 1847 and 1852?

Objected to as leading, and as far as said question of facts—any one except Charles J. Shepard. It is also objected to because the other members of the firm are not mentioned in the answer.

A. He used to frequently speak of fire-place heaters—of having sold and put them up without specifying any particular year in which they were put up. Of course they must have been put up before 1852.

Answer objected to by complainants' counsel as hearsay, and last part of it as irresponsive.

Q. 17. Did you personally see the fire-place heater which you have described at Charles J. Shepard's said place of business between the years 1847 and 1853?

Same objection as to question 12.

A. I won't say that I saw them between 1847 and 1853. I saw them between 1840 and 1850 or 1852 in that store 242 Water street. Part of that time it was Stratton & Seymour there.

Q. 18. Then do you mean that it was either while the business was in the hands of Stratton & Seymour or in the hands of
482 Shepard & Co. that you so saw this fire-place heater at 242 Water street and talked with Charles J. Shepard about its sale and use?

Same objection.

A. Yes; with Robert M. Stratton also.

Q. 19. While Stratton & Seymour had the business at 242 Water street was Charles J. Shepard employed there?

A. He was.

Q. 20. Do you know in what capacity?

A. A general clerk.

Q. 21. Then, from your conversation with him between the years 1847 and 1852, while your place of business was within one door of his, would you say that he had knowledge of the sale and use in the city of New York between the years 1840 and 1850 of fire-place heaters such as you have described?

Objected to as leading and as irrelevant, the question not calling for facts.

A. I can't say that these conversations took place between 1847 and 1852, because I knew Mr. Shepard long before 1847 and had almost daily conversations with him as to business transactions and sales of various articles, including sales of these heaters.

Q. 22. Then, from your conversation with Charles J. Shepard, between 1840 and 1852, would you say that he had knowledge of the sale and use in the city of New York, between those years, of fire-place heaters such as you have described?

Same objections.

A. I should say he had.

Q. 23. State whether these fire-place heaters so sold and used heated both the room in which they were set and also conveyed heat to the apartment above that in which they were set.

483 Objected to as leading and because it does not appear that the witness has any knowledge on the subject.

A. Could be if they were set right; they could be used either way.

Q. 24. Did said Charles J. Shepard state to you that he had set them within those years in order to give heat out to both places?

Objected to as leading and as *for* calling for hearsay evidence.

A. Yes.

Q. 25. How frequently did you see such fire-place heater in Stratton & Seymour's time and in Shepard & Co.'s time?

Objected to because witness is not mentioned in the answer.

A. Almost daily.

Q. 26. You have stated that you were in business at 265 Water street up to the year 1847. Were you as intimate and friendly with Charles J. Shepard up to this time as you were after you got within one door of his place of business?

A. Yes; quite so.

Q. 27. Did said Charles J. Shepard and his firm also deal in Nott's outstanding stoves, and did they also have a magazine or top feed arrangement in them?

A. Yes.

Q. 28. Please look at the circular now shown you (marked Defendants' Exhibit Brown No. 3), and state if you ever saw such circulars before; and, if so, between what years.

A. Yes; I have seen those circulars between the years 1842 and 1852—after 1842.

Q. 29. Is there on Defendants' Exhibit Brown No. 3 any representation of a fire-place heater which you have described? If so, point out the same.

484 A. There is a front view in one representation here and partial side view in another small one.

Q. 30. Do such illustrations show the flues or heating surface which you say was at the rear of such heaters?

Objected to on the ground that the question assumes that the witness has sworn to what he has not said.

A. It does not.

Q. 31. Do they show the part projecting into the room and also the point at which the fuel is fed into the heater?

Objected to as leading.

A. Yes.

Q. 32. You stated in answer to question 17 that part of the time it was Stratton & Seymour's—that is, between 1840 and 1852; what part of that time was it Stratton & Seymour's place of business?

A. The early part of 1842 or the latter part of 1841. I am not certain that Shepard went there in the latter part of 1841 or the first of 1842.

Q. 33. Did the magazine in which the fuel was fed come up to the top plate of the fire-place heater which you have described, and the front of which is illustrated on Brown No. 3?

Objected to as leading.

A. The fuel went up to the top plate covering the magazine.

Q. 34. Then, when the fire-place heater was filled with fuel, the fuel extended up to the surface or cover on which the urn sets, as shown in illustration marked Saracenic grate for dining-rooms, &c. Is this what you mean?

Objected to as leading and as assuming what witness has not testified to.

485 A. I mean that it went up to the top of the plate where the urn sets on the heater, which I have described.

Q. 35. Please state briefly the members of the first firm at No. 242 Water street, then their successors, Stratton & Seymour, and then the successor's firm, Shepard & Co.?

A. Charles L. Clusman was before Nott & Co., at 242 Water street, to 1831 and 1832; then H. Nott & Co., which was composed of Howard Nott and Benjamin Nott, from 1832 to 1837; then Stratton & Seymour, composing the names of Robert M. Stratton and Captain Seymour (I do not recollect what Captain Seymour's first name was), from 1837 to 1842; and then Shepard & Co., which was Charles J. and Thomas M. Shepard. The firm name has remained until the present date.

Q. 36. Are either of the said Shepards now alive?

A. No.

Q. 37. Have you seen any of said fire-place heaters such as you have described, and such as is partially represented on Defendants' Exhibit Brown No. 3, since the year 1852, either at 242 Water street or any other place, or any patterns of such fire-place heater?

A. No.

Cross-examined by Mr. LEE:

Reserving all objections, counsel for complainants objects to the examination of this witness on the ground that defendants' time to take testimony has expired, and because the witness is not named in the last order extending defendants' time to take testimony, of which complainants' counsel has been reliably informed.

Defendants' counsel desires it noted that he notified complainants' counsel before the commencement of the examination of this witness that an order had been entered extending defendants'

486 time for taking testimony and for the examination of this witness, and that he, defendants' counsel, had been so informed by the examiner taking the testimony in this case.

X Q. 38. Will you please state when you last carefully examined one of the fire-place heaters that you have described?

A. When I last examined it?

X Q. 39. (Question repeated.)

A. Subsequent to the year 1840. I couldn't fix any precise date, always talking about those things.

X Q. 40. How long is it since you left the stove business?

A. Two months.

X Q. 41. Please state what has been your business, and where, since the year 1852.

A. Been? From 1852 to 1854 I was out of business. From 1854 to 1862 I was in business on Broadway—furnace and range and stoves. From 1862 to 1866 I was at 233 Water street; then I was out of business until 1871; then I went into business again at No. 254 Water street; then I was out of business until 1874, when I

went to 231 Water street; then in 1876 (I was there until 1876); then I went back to Broadway until 1878; then I went to 231 Water street again till 1879; that brings me down to two months ago.

X Q. 42. Will you please state the last time you had any conversation with any one concerning the fire-place heaters which you have described, before you were spoken to about them in connection with your examination in this case?

A. About 1871, with Mr. Shepard.

X Q. 43. How did you come to have the conversation with Mr. Shepard?

A. By meeting him at his place of business and talking about old affairs and business generally, and alluding to improvements and alterations and changes in general heating apparatus.

X Q. 44. Was this conversation connected with any litigation?

487 A. No, sir.

X Q. 45. Do I understand correctly that the heaters which you saw were in the store of Shepard or his predecessor, but were not actually in use?

A. In the store of both firms on sale.

X Q. 46. You mean to say that they were on sale by both firms, but were not in actual use when you saw them?

A. Not in actual use.

X Q. 47. You have stated that the heaters you have reference to projected in front of a grate frame which surrounded the heater which filled the space between the heater and the jams of the chimney—did you ever see one of these stoves or heaters set into this grate frame; and, if so, when and where?

A. Yes; seen them in that store, 242 Water street, on sale.

X Q. 48. When you saw them was the frame actually surrounding the heater, or was it separate?

A. All mounted complete on the heater, and ready to be set in a fire-place.

X Q. 49. Please describe this frame as accurately as possible.

A. Frame was square, piers, with a cross-bar—that is, a cross-top to them that is a regular square grate frame, flat; the center top piece was carried upward to a point in the centre on a line with the two square piers, as I call them, which piers had a castellated top; they were Gothic ornamentation.

X Q. 50. Of how many pieces was this frame composed?

A. I think it was in one piece; it might have been in three, as that formed no part of the invention; I did not examine it so closely as to determine.

X Q. 51. Was said frame entirely solid?

A. I don't know what you mean; if you mean a solid casting it would not have any holes in it; then it was not solid; there were openings in the upright end strips or piers, as they were called in my last answer.

488 X Q. 52. Please state how large these holes were, how far were they apart, and describe their peculiarities.

A. I couldn't answer that, because I did not measure them; only know they were there.

X Q. 53. Do you know whether they were put there for ornament, or whether they performed some function?

A. They performed a purpose.

X Q. 54. What was the purpose?

A. Admission of cold air in the radiating surface behind the heater when it was used as a fire-place heater to warm the rooms above, or let out hot air from the same surface when it was intended only to warm the room in which it stood.

X Q. 55. Will you please state how you come to be examined as a witness here?

A. I was subpœnaed.

X Q. 56. When were you first spoken to about testifying in this case?

A. About a month ago.

X Q. 57. Who first spoke to you?

A. Mr. Rice.

X Q. 58. Please state as accurately as you remember what occurred when Mr. Rice spoke to you on the subject.

A. About the first of the year I asked Mr. Rice if he could get me a position in Mr. Nott's establishment, and seeing him frequently we had frequent conversations as to such a position being obtained for me; on one occasion I mentioned that I was going over to see Miss Shepard to see if I couldn't get a position in her store; Mr. Rice said that I might do him a favor and save him the trouble of going over to see her, if, at the same time, I could get her to give me the privilege of examining this heater; I saw Miss Shepard and procured this order from her for Mr. Hassen to examine this heater; I did not present that order to Mr. Hassen until two days after; Mr. Hassen on reading the order said he could not show me the heater, as
489 he had received a note to that effect from Miss Shepard, at the same time giving me a letter from Miss Shepard explaining why she changed her mind; I showed this letter to Mr. Rice, and asked him what heater was in controversy, and what was wanting; he explained the kind of heater that he wanted, when I told him I knew all about it, and I suppose that led to my connection with it.

X Q. 59. When did you tell Mr. Rice you knew all about it?

A. When I showed him that letter from Miss Shepard. I think it was about the 4th or 5th of January; about the first week in January.

X Q. 60. How many times did you see Mr. Rice on the subject?

A. Several times we have spoken of it; probably a half a dozen times.

X Q. 61. Who else did you speak to about this matter before you were examined?

A. I spoke to a Mr. Fagan and Mr. Andrews; I don't remember of any others at present.

X Q. 62. Did you not speak on the subject to Mr. Burtis or to Mr. Mott?

A. No, sir.

X Q. 63. You have testified in regard to the mode of operation of the heater that you have described. Your knowledge on the subject is not derived from seeing one of them actually in use, is it?

A. No.

X Q. 64. Please state the last time when you saw one of the fire-place heaters, such as you described.

A. Some time subsequent to 1840, I think.

X Q. 65. Are your relations friendly with Miss Eliza M. Shepard?

A. Perfectly so.

X Q. 66. Do you not think that you could obtain permission from her to examine her store, and search for a sample of the fire-place heater you have referred to, and its patterns, provided you made an effort to do so?

A. I made that effort, and she gave me that permission, and countermanded the order.

490 X Q. 67. Notwithstanding the countermand, do you not think you could obtain the permission by personally seeing her and taking some pains to induce her to give it?

A. I do not think she would give me the permission.

X Q. 68. Have you made any effort whatever, since Mr. Hassen showed you the countermand, to obtain such permission?

A. None whatever.

X Q. 69. Referring to the holes in the frame of the heater, can you not give me some idea as to their size?

A. No; I could not.

X Q. 70. According to your best recollection, were they a half an inch in diameter?

A. I couldn't give—I could not give any idea of the size, as they were a feature that did not enter into the principles contained in the patent.

X Q. 71. Did they extend over the top of the frame?

A. No.

X Q. 72. How high upon the sides did they extend?

A. They extended up as high as the stove; probably they were in clusters.

X Q. 73. Are you as sure of the correctness of your answer to the last question as you are of everything else you have testified to?

A. I am not sure as to the answer to the last question as I have qualified it.

X Q. 74. You only qualified the last half of the answer to cross-question 72. Are you as sure of the correctness of your answer to cross-question 72, down to and including the word "stove," as you are of everything else to which you have testified?

A. I am not, as the whole answer is qualified in my estimation.

X Q. 75. In regard to the frame and its holes, then, am I to understand that you are not as sure as in regard to the other matters to which you have testified?

Objected to as vague and indefinite.

491 A. I am sure as to the frame; I am satisfied that I have described it correctly, and as to the holes, position of the holes—the size—I am not able to state.

X Q. 76. Have you recently been shown a drawing or drawings said to represent the old heater you have testified about?

A. I have.

X Q. 77. Did you not find them very incorrect and imperfect?

A. I did.

X Q. 78. Were these drawings shown you by Mr. Todd, defendants' counsel?

A. They were.

X Q. 79. Were you not asked to testify that these drawings substantially represented the heater that you have described, and did you not decline to do so on the ground that they were incorrect?

A. No.

X Q. 80. Were you not asked concerning those drawings, and did you not inform counsel that you considered them imperfect and incorrect, or words to that effect?

A. Yes.

X Q. 81. I mean before this examination was begun, and the counsel I refer to is the defendants' counsel.

A. Yes.

X Q. 82. Have you recently been shown a tin model said to represent the old heater to which you testified about?

A. Yes.

X Q. 83. Did you not find it very imperfect and incorrect?

A. Yes.

X Q. 84. Did you not inform the defendants' counsel prior to this examination that you considered said tin model very imperfect and very incorrect, or words to that effect?

A. Yes.

492 X Q. 85. Is this model (Defendants' Exhibit Brown No. 2) the model which was shown you?

A. It is.

X Q. 86. And is this drawing (Defendants' Exhibit Liddle No. 1) one of the drawings shown you?

A. Yes.

X Q. 87. And is this drawing (marked Exhibit Hassen, for identification) the other drawing so shown you?

A. Yes.

X Q. 88. Were you not asked by defendants' counsel to testify that this tin model (Defendants' Exhibit Brown No. 2) substantially represented the heater that you have described, and did you not decline so to do?

Defendants' counsel gives notice that complainants' counsel is making the witness his own by this line of cross-examination and that he must take his answers as such.

Complainants' counsel submits that the question is a proper one for cross-examination.

A. No.

Redirect:

Defendants' counsel states that he did not call the witness' attention to the drawings and models, because such witness gave a very clear description of the heater from his own recollection, and because counsel supposed the placing of such drawings and models for the witness to testify respecting would be objected to as leading. Counsel, however, supposing such objections to be waived with this witness in this regard, proceeds to refer to such drawings and model in the examination of the witness.

493 Counsel for complainants states that he does not waive any objections to improper questions put to this witness.

R. D. Q. 89. Please look at the model (Defendants' Exhibit Brown No. 2) and state how it compares with or differs from the fire-place heater which you have testified to as having been sold by Stratton & Seymour prior to the year 1841 or 1842, and by Shepard & Co. between the years 1842 and 1852, so far as the feeding in of the fuel at the front and the heating apparatus at the rear of the heater is concerned.

Objected to as leading and because witness is not mentioned in the answer, also as not redirect.

A. The feeding in at the top is very well shown; the magazine is very well shown; the back upward flue is very well shown, but the communication from the back upward flue to the single downward flue and through the chamber at the top of the cross-chamber at the bottom and the two upward flues to the chamber at the top with the exit-pipes are not well represented in this model. The principal features of the novelty of the invention, however, are very well exhibited.

R. D. Q. 90. Please look at the drawing (Defendants' Exhibit Liddle No. 1) and state how that represents the Stratton & Seymour and the Shepard heater you have described, so far as the two features I referred to in the 89th question are concerned.

Same objections.

A. It is rather a crude drawing. I don't understand it. It represents that part in front of the frame very well, and the magazine, but the flues are rather imperfect.

R. D. Q. 91. Could not the flues be understood from the
494 drawing—that is, the direction the products of combustion take in passing through them, in view of the fact that the place for these flues are marked "flue, &c.?"

Objected to as leading.

A. I don't think they could; there is no distinction made here between cold-air flues and hot-air flues.

R. D. Q. 92. Please look at the drawing again and see if you do not discover thereon spaces between said flues marked "air space;" would not this indicate that the remaining spaces—namely, the flues—with the arrows, have reference to the passages for the products of combustion to go through?

Same objection.

A. Yes, they would; I see spaces here marked "air space" which I did not see before.

R. D. Q. 93. Please look again at the drawing No. 1 and state whether there is not shown at the back of this drawing two flues so marked "flue" with an air space between them so marked "air space;" and do not these flues marked "flues" lead from a horizontal base containing an arrow to an upper chamber on which is represented a pipe with a damper, the damper leading out to the front?

Objected to as leading and as incompetent.

A. Yes; that is all shown here.

R. D. Q. 94. From the passages being so located and so marked, what would you conclude was to pass through them?

Objected to as incompetent.

A. The products of combustion is supposed to pass through
495 the flue, and cold air from the room around the flues, around through the air spaces, the air spaces supposed to be around the flues.

R. D. Q. 95. Please look at the cross-section of that same drawing now shown you, and which is marked "Exhibit Hassen," and state whether you do not find one of these same flues in cross-section marked "G?"

Objected to as leading and as assuming what is not proved.

A. Yes.

The examination of this witness adjourned by consent to Thursday, March 4th, 1880, at 1 o'clock p. m.

NEW YORK, *March* 4, 1880.

Parties met pursuant to adjournment.

M. P. LOW.

Sworn to before me March 4, 1880.

JOHN A. SHIELDS,
Examiner, &c.

Adjourned by consent to Saturday, March 6, 1880, at 12 m.

NEW YORK, *March* 8, 1880—12 o'clock m.

Adjourned to Tuesday, March 9, at 12 m.

496 NEW YORK, *March 9th*, 1880—12 o'clock m.

Adjourned to Wednesday, March 10th, 1880, at 12 m.

NEW YORK, *March* 10, 1880.

Above case stands adjourned until Thursday, 12 m., March 11th, 1880.

NEW YORK, *March 11th*, 1880.

Adjourned to Saturday, March 13th, 1880, at 12 o'clock m.

NEW YORK, *March 13th*, 1880.

Adjourned by consent to Monday, March 15th, at 12 m.

NEW YORK, *March 15th*, 1880.

Pursuant to adjournment parties met, and above cause is further adjourned by consent until Wednesday, March 17th, 1880, at 11 a. m.

NEW YORK, *March 17th*, 1880.

Above cause adjourned to Friday March 19th, 1880, at 12 m.

497 NEW YORK, *March 19th*—12 m.

Above cause adjourned to Saturday, March 20th, 1880, at 12 m.

NEW YORK, *March 20th*—12 m.

Above cause adjourned to Tuesday, March 23d, 1880, at 12 m.

498 NEW YORK, *Feb. 19th*, 1881—11 o'clock a. m.

Met pursuant to notice.

Present: A. J. Todd, Esq., for defendants, W. H. L. Lee, Esq., for complainants.

JOHN M. GRAFF a witness produced on the part and behalf of the defendants, being duly sworn, testifies as follows:

1 Q. Are you one of the defendants?

A. Yes, I am.

2 Q. Will you please produce one of the fire-place heaters, such as the defendants in this case made and sold prior and up to the date of the commencement of this suit, and for the sale of which an infringement of the Thatcher patent is charged in such suit?

A. I will and do. We do not manufacture the heaters now this is one of the old heaters on which the suit is based. I did not know that this one was in existence till this morning.

Fire-place heater referred to by the witness put in evidence as "Defendants' Exhibit Burtis & Graff Fire Place Heater."

3 Q. Had this fire-place heater, or any other fire-place heaters which the defendants so made and sold, any exterior casing which was either attached to such fire-place heater or inserted into the fire-place before the heater was put into such fire-place, so that the products of combustion, smoke, &c., passed at the rear of such casing and between such casing and the chimney wall?

499 A. There has never been any heater made on any such plan since I have been connected with the firm of Burtis & Graff; that was 11 years ago in 1869.

Counsel for complainants seasonably objected to the examination of John M. Graff as a witness for the defendants on the ground that the order for extending defendants' time for taking proofs only allowed them further time for the purposs of examining an expert herein. Notice is given that a motion will be made on the hearing

to strike out the testimony of this witness on the ground that there is no authority for taking his deposition herein, on which motion the various orders extending defendants' time to take proofs herein, and especially the orders filed January 8, 1881, and February 11, 1881—

Defendants' counsel states that he has frequently applied to complainants' counsel to make admissions as to existing prior structures and as to defendants' structure, and that it was not stated that such admissions would not be made, although as to the existing prior structures complainants' counsel preferred that they be introduced with proof respecting the fact of their existence: that, in place of asking admission as to what the defendants used, counsel merely seeks to introduce it coupled with the oath of one of the defendants, preliminary and incidental to the examination of the expert: that such is necessary before such examination: and it not appearing that the complainants put in evidence any of the defendants' structures of fire-place heaters, had counsel supposed that this purely technical objection would have been made to this merely formal proceeding, counsel would have asked the court for leave, and he gives notice that he will ask leave at the hearing, to have stand the
500 introduction of evidence which it was fairly the duty of the counsel for complainants to have adduced in his *prima facie* case.

Counsel for complainants states that he has repeatedly refused the application on the part of defendants' counsel for admissions such as defendants' counsel has just referred to, and has informed the defendants' counsel that he must prove such facts if they existed, and the statement to the contrary by defendants' counsel is a mistake.

The question No. 3 is objected to as leading.

Cross-examination *de bene esse:*

4 X Q. By what trade name is the fire-place heater ("Defendants' Exhibit Burtiss & Graff Fire Place Heater") known?

A. It is now known as the "Burtis Fire Place Heater," and was first called "Morning Glory:" I don't know how long it was before the name was changed to "Burtis:" I think about two years: D. G. Littlefield used the name "Morning Glory," and objected to our using it.

Redirect:

5 R. D. Q. Mr. John M. Thatcher testified that your firm made the "Morning Glory," "Burtis," two patterns, and also the "Mayflower." Please explain as to this third heater, the "Mayflower," and as to the Burtis, two patterns.

A. It only differs from the Burtis in ornamentation and style of outward finish. I think we began to make it about five years ago: I can't be positive.

JOHN M. GRAFF.

Sworn to before me this 19th day of February, 1881.

JOHN A. SHIELDS, *Examiner.*

501 WILLIAM E. HAGAN, a witness produced on the part of the defendants, being duly sworn, says:

1 Q. What is your name, age, residence, and occupation?

A. William E. Hagan; my age is 55 years; I reside at Troy, N. Y., and my profession has been that of a chemical and mechanical expert.

2 Q. What, if any, experience have you had in the comparison of mechanisms, as to their similarities and differences; and have you acted as expert in patent causes in the U. S. courts, and particularly in regard to devices for burning fuel; and, if so, for what length of time and to what extent?

A. I have resided for nearly the whole of my life in a locality where a large proportion of the stoves and furnaces produced in the United States are manufactured, and almost daily brought in contact with inventors of improvements in them for the last eighteen years; and during which time I have been consulted and employed as an expert in a large majority of the cases occurring in the U. S. courts, wherein inventions in stoves and furnaces were a matter of legal controversy.

Counsel for defendants puts in evidence a certified copy of reissued letters patent granted to Eliphalet Nott October 17, 1835, "for improvement in the adaptation of the anthracite coal stoves to open fire-places," which is received and marked as "Def'ts' Exhibit 19, Nott Reissue."

Also puts in evidence a certified copy of figures 14 to 20, inclusive, of the drawing in the matter of the reissued letters patent granted Eliphalet Nott October 17, 1835, for improvement in stoves, &c., which is received and marked "Def'ts' Ex. 20, Part of Nott Reissue Drawings."

Also puts in evidence specification and drawings of English letters patent granted to Coad & Coad in the year 1852, and
502 numbered 738, Ex. 21, which is marked Def'ts' Ex. 21.

Also puts in evidence a certified copy of reissued letters patent granted to Eliphalet Nott September 17, 1832, which is marked Def'ts' Exhibit 22.

3 Q. Have you examined the state of the art as presented by the patents in evidence in this case with reference to the existence of a "magazine feed," generally considered in outstanding stoves; and, if so, will you please state what you find therein as to such magazine feed and its construction and arrangement?

A. I find, on having made an examination of the patent granted to B. T. Roney, known as reissue 5096, that a "fuel magazine or feeder" was inclosed within the cylinder or jacket of the stove, and that said magazine had "an opening through which it, the magazine, can be fed from above." I also find the Roney patent to illustrate and describe, as arranged in a base-burning stove, "a magazine or feeder which is extended to the outer feed opening of the outer casing, so that there may be no open space across which to project the fuel on feeding the magazine." I also find a construction embodying the same elements, so far as relates to a magazine

within a cylinder or casing, with the magazine having an opening at the top of the stove, and through which fuel can be supplied to the magazine without projecting it across an open space. I also find in the patent issued to W. C. Durant, Defendants' Exhibit 13, that a magazine is also arranged within a cylinder or jacket, and the magazine has a top opening through which fuel can be fed in the same manner as the other exhibits which I have described. I also find in the English patent issued to William Harper and Thomas Walker Defendants' Exhibit 17, in which there is illustrated and described a stove which has a fuel magazine extended to the top of the outer casing, and provided with an opening from which fuel can be fed in the opening in the same manner as the other exhibits I have described.

503 4 Q. Please look at letters patent Complainant's Exhibit B, and state whether you have read and understand the same.

A. I have read and understand the subject-matter of the patent named in the question.

5 Q. Please compare said letters patent, Exhibit B, with the patents referred to by you in your answer to the third question, and state how you find the magazine feed arranged with reference to the stove or heater cylinder in the respective patents, confining your answer to the first and second claims of Exhibit B.

A. I find in all the older patents named a fuel magazine or feeder which extends to the top of the cylinder surrounding the magazine, and all that portion of the magazine within the cylinder arranged with reference to the latter in exactly the same manner as the magazine or feeder shown in the Thatcher patent; but within the latter the magazine is provided with "a movable section O, which has a cover 'O¹.'" When this movable top is applied to the Thatcher device, then the magazine is extended above the ordinary stove top, and in this respect differs from the old exhibits I have named; but inasmuch as the third claim of the patent specially claims his construction, I assume the first and second claims to refer to the feeder constructed without this movable top. Hence, with this understanding of the patent and the invention broadly considered, the older patents I have named in this connection contain "a fuel magazine or feeder within the cylinder, and an opening through which the said magazine can be fed from above," as occurring in the first claim. The invention made the subject of the second claim broadly considered as elements of stove structure also occur in these older patents, in each of which "the magazine is extended to the feed opening of the outer casing." It is plain that the first and second claims relate to the feeder with the upper extension removed, because it is a condition and enacting force of the second claim by which the magazine is extended to the feed opening of the outer casing, which construction would be impossible with the top extension added.

504 6 Q. Please compare said Thatcher patent, Complainants' Exhibit B, with the Nott reissued letters patent, Defendants' Exhibits 19 and 20, and state whether you find in said Nott reissued letters patent the invention described and referred to in said Ex-

hibit B, and give any reasons you may have for the conclusions that you arrive at.

A. If the invention claimed in Exhibit B, and therein described, be considered broad enough to cover elements of stove structure broadly and without regard to specific application, I do find the elements named in the Thatcher patent to occur in the Nott reissue, and as shown in figure 20 of the drawings attached to the same, in which there is shown a stove body or cylinder containing a magazine or feeder within the cylinder or body, "and an opening through which the said cylinder can be fed from above." If the invention be limited by the patent in application to a fire-place heater constructed with a concave back, forming a hot-air chamber in connection with the heater, a hot-air chamber upon one side of the concave plate, and the other side of the plate between it and chimney a full passage for the smoke and gases, I do not find it there.

The improvements set forth under this reissue of Nott's patent, under consideration, are entitled "In the adaptation of the anthracite coal stove to open fire-places, for which letters patent were granted, dated the 25th day of October, 1832." On examining figure 17 of the drawings a fire-place stove or heater is illustrated, and at figure 20 a vertical section of a stove containing a fuel magazine within the stove body, and constructed to be supplied with fuel from an opening in the top of the magazine. The illustrations which I have named are very clear in their details, and contain the elements which I before described, and their arrangement as I have stated.

7 Q. Please compare the structure which the defendants have made and sold, namely, "Defendants' Exhibit Burtis & Graff Fire Place Heater," with the Thatcher patent, Exhibit B, so far as the first two claims are concerned, and with the patents showing the prior state of the art, and state whether you find the defendants' structure in said Thatcher patent.

505

A. If we assume the Thatcher patent, as stated in the first and second claims, to include elements of stove structure, consisting of "a fuel magazine or feeder within the cylinder, and an opening through which the said magazine can be fed from above," broadly and for the elements themselves rather than for a specific application of these elements, then they undoubtedly are found in the defendants' device named in the question. But if the claims refer to the specific application of these elements and their combination with a particular kind of fire-place heater they are not there.

As regards the second claim, the same conditions which apply to the first, as I have named, apply to it also. The Thatcher patent describes but one kind of fire-place, heater, or stove which is peculiarly constructed with reference to the "concave stationary back plate *a*," and this does not occur in the defendants' furnace, Exhibit Burtis & Graff Fire Place Heater, nor is the latter constructed with reference to its rear line so as to utilize such a concave plate.

8 Q. Please compare the heater described in Exhibit B, and claimed in the first two claims thereof, with the heaters put in evidence and referred to on page 183 of defendants' record, namely,

"The American" and "The Budd Heater No. 2," and also with the patents referred to by you as showing the state of the art in this case, and state whether there is any additional feature or construction referred to in said claims in view of said prior structures, and any change that calls for the exercise of the inventive faculty.

A. On examining the heater described in Exhibit B, also "The American" and "The Budd" heaters, I find that all of them have a "body or cylinder projecting outwardly from the mantel or
506 frame;" and in this respect they coincide with the device shown and described in the Thatcher patent. I find also in the old patents which I have examined that a magazine has been inserted within a cylinder in each of them. In the Thatcher invention, and which is made the subject of the first claim of the patent, "a cylinder or body projecting outward from the mantel or frame, a fuel magazine or feeder within the cylinder, and an opening through which the said magazine can be fed from above," I find that Thatcher has taken the magazine shown and described in the older patents and placed it within a cylinder or body projecting outward from the mantel or frame in the same manner as is shown in these older patents; in other words, he has taken, for instance, the magazine illustrated in the Roney patent, the Treadwell patent, the Durant patent, and the Noll reissue and placed it in the outwardly projecting body of the Budd or American heater. In my opinion no inventive capacity of mind was exercised in taking from an older stove a magazine which is fed from the top through an opening and placing it within the outwardly projecting body or cylinder of the "Budd" or "American" heater. My principal reason for this is that no new result was produced by the combination of the older outwardly projecting body or cylinder and a magazine. The magazine would perform the same function in the Thatcher device that it did in the Roney stove, the Treadwell stove, or the Durant stove, and the outwardly projecting body or cylinder of the "Budd" and "American" furnaces or the "Thatcher" furnace would perform the same office whether the magazine was inserted or not. I will not state, however, that any peculiar arrangement of magazine and an outwardly projecting cylinder, if new in the relation to which they were combined, would not constitute an invention, but I cannot conceive that the mere grouping together of these older elements, merely as an aggregation, would call into exercise any inventive faculties of the mind whatever, but in application
507 come within the compass of ordinary mechanical skill. A person seeing a magazine operating in the "Roney" stove, the "Treadwell" stove, and the "Durant" stove, and also seeing the projecting body or cylinder of the "Budd" or "American" heaters, could apply the one to the other and produce the device shown in the "Thatcher" patent without taxing any of the inventive faculties of the mind whatever.

WILLIAM E. HAGAN.

Adjourned, by consent, to Thursday, February 24, 1881, for cross-examination of witness, William E. Hagan, at 3 o'clock p. m.

NEW YORK, *March* 15, 1881.

Met pursuant to adjournment.

Present: Counsel for the respective parties.

Counsel for complainants waives cross-examination of the witness, William E. Hagan.

Defendants' proofs closed.

(Here follows diagram marked p. 508.)

509 UNITED STATES PATENT OFFICE.

ALBERT BROWN, of Troy, New York.

Letters Patent No. 61922, dated February 12, 1867.

Improvement in Coal Stoves.

The schedule referred in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, Albert Brown, of Troy, in the county of Rensselaer and State of New York, have invented new and useful improvements in constructing reservoirs or magazines for containing fuel for "base-burning" or "reservoir" stoves, and I do hereby declare that the following is a full and exact description thereof, reference being had to the annexed drawings and to the letters of reference marked thereon, and forming a part of the specification, in which—

Figure 1 is a perspective view, showing the said improved reservoir, and figure 2 is a vertical section of a stove with said improved reservoir, and showing the operation of the same, the same letters referring to like parts in each of the said figures.

That the object of my said invention and improvements may with more distinctness appear, the defects and difficulties in the operation of reservoirs or magazines as now ordinarily employed in "base-burning" stoves are first mentioned. These defects consist in the collection within or filling of said reservoirs with the evolved combustible gases and heated products of cumbustion generated below and at the base or throat of the reservoir, and in consequence thereof these gases escape more or less from said reservoir into the room, and at times the vaporish products of combustion collected within said reservoir do more or less condense into a tarry liquid that oozes through the joints and upon the outer surface of the stove: and, furthermore, the gases so filling or collected within said reservoir do sometimes explode, or they may and do frequently cause ignition of the coal within and throughout the same, the ignition proceeding from its base up to its top, until the whole supply within the reservoir becomes a burning mass of coal. These defects in their operation are caused mainly by the manner of construction of said fuel reservoirs or magazines. In form they are close cylinders, open at their bases or throats, and closed tightly at their tops or upper parts

Defts Exhibit Brown Patent

508

A. BROWN.

Magazine Stove.

No 61,922. Patented Feb. 12, 1867.

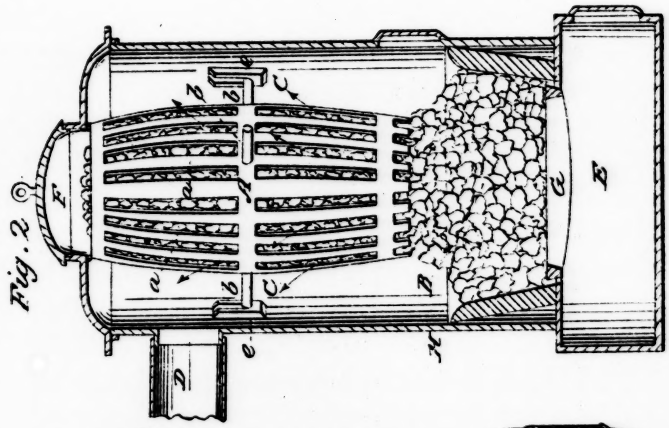


Fig. 2.

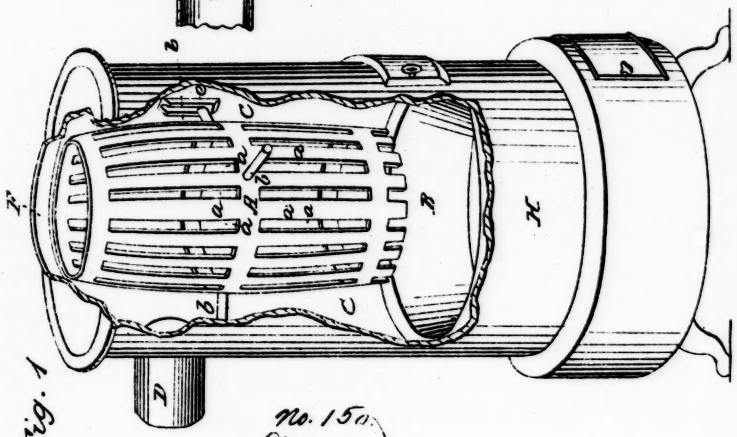


Fig. 1

No. 15
Thatcher Heating Co. et al. v. Burtis et al. } p. 508.

Witnesses:

J. L. Bonney

J. J. Savage

Inventor:

Albert Brown

by close-fitting covers or doors. Hence the evolved gases and heated products of combustion generated by the fire below rise into and fill said reservoirs, and, there being no adequate means provided for their free escape therefrom, the difficulties and inconveniences, as before stated, do now naturally follow.

To remedy or obviate the defects and difficulties as aforesaid in the operation of reservoirs or magazines in stoves is the object of my invention and improvements, and the nature of the same consists in the construction of a fuel magazine or reservoir with lateral apertures or vents in such a manner that all combustible and heated gases that may rise or be generated therein are permitted free escape through said vents into a circumjacent combustion chamber to be there consumed, said vented fuel magazine or reservoir being constructed and arranged to operate in combination with the fire-box and combustion chamber of stoves in manner substantially as hereinafter fully described.

To enable others skilled in the art to make and use my invention, I will now proceed to fully describe its construction and operation:

My improved magazine or reservoir is made or cast in vertical sections or separate parts, for the purpose of readily forming vents or apertures in the same, and also for securing more convenience and greater economy in manufacturing. These respective parts or sections are then bolted, riveted, or otherwise secured togeter, in manner to form a fuel magazine or reservoir, A, for stoves, substantially as shown in the annexed drawings, and one having a series of apertures or vents, *a a a*, made in and through its vertical sides, from its base to its top parts, or nearly so, in manner substantially as shown in said drawings, these apertures or vents being in number more or less, varying according to their sizes and according to the size of coal used in said magazines, the main object being, when proportioning the size of the vents, to get sufficient area of vents in the aggregate to accomplish the object of readily freeing the rising gases from the magazine or supply chamber A. Said vents may be of a slot, circular, or other suitable form, and they are arranged in groups or rows on and through the vertical sides of the magazine, either in vertical, horizontal, or diagonal positions to the same; but in practice I prefer the vertical arrangement of them, substantially as shown in the annexed drawings. Said improved magazine A is arranged within the combustion chamber C of a stove and at a proper distance above the fire-pot B of the same, to suitably supply it with fuel, and it is held in such adjusted position by its projecting arms *b b b*, the outer ends of which rest in sockets *e e e*, cast or riveted to the outer walls or plates of the stove, substantially as shown in annexed drawings.

To operate a stove having this improved reservoir or magazine, start a fire in the fire-pot B in the usual manner, and when well going and a sufficient bed of live coal is formed remove the cover at the top of the stove and fill the magazine A with coal, which then will feed the fire in the usual known manner. But the peculiarity or novelty in the operation of my improved magazine

consists in its freedom from those defects and inconveniences in operation, as hereinbefore mentioned, and inherent, more or less, in the magazines as now in common use, and its freedom from such defects I ascribe to its being provided with vents or apertures, as hereinbefore set forth, for the free escape of gases from within it as soon as they rise into or are generated therein. Hence there can be no collection of gases within my said improved magazine, and in consequence there is no escape or leakage of gases from it into the room, nor can there be any condensation of gases or of vapors within the magazine, nor any explosions of gases therein; nor is there that liability of the whole supply of coal within the magazine becoming ignited or "burning up" into the same until the whole contained supply is a burning mass of coal, and for this reason the gases generated in the lower part of the magazine by the heat of the fire below and at its base naturally find their easiest way of escape therefrom, and are drawn from the magazine through the vents or apertures aforesaid into the combustion chamber by the natural draught of the stove, and are therein consumed. This is the reason why combustion does not follow up into my vented or improved magazine, for such a concentration of gases and heat that collect within unvented magazines or reservoirs, and which is the cause of the contained coal igniting and "burning up" through the magazine, cannot occur in my improved or vented fuel magazine or reservoir. My invention also simplifies the construction of "base-burning" or "reservoir" stoves, making them as safely and easily managed as an ordinary stove.

Having thus fully described my invention in stoves, what I claim and desire to secure by letters patent is—

In combination with a fire-box and combustion chamber of stoves I claim a fuel magazine or reservoir A, as provided with lateral vents or apertures *a a a*, substantially in manner as herein described and for the purposes set forth.

ALBERT BROWN.

Winesses:
I. L. BARNEY.
J. J. SAVAGE.

(Here follows diagram marked p. 511.)

512 UNITED STATES PATENT OFFICE.

JASPER VAN WORMER and MICHAEL MCGARVEY, of Albany, New York.

Improvement in Base-Burning Stoves.

Specification forming part of Letters Patent No. 54447, dated May 1, 1866.

To all whom it may concern:

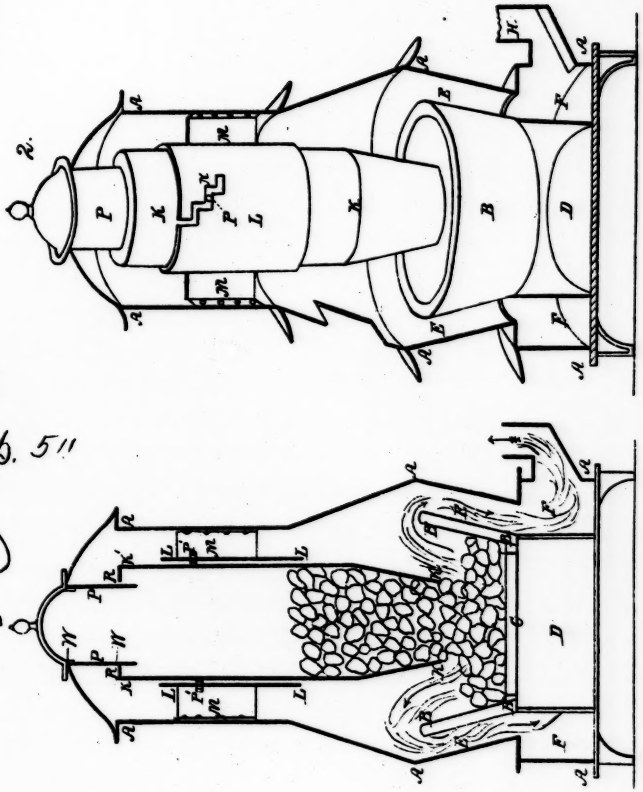
Be it known that we, Jasper Van Wormer and Michael McGarvey, of the city of Albany, State of New York, have invented certain new and useful improvements in the construction of magazine or

Defts Exhibit Van Horner Patent

Van Worner & McCarvey

Magazine Stove.

No 54,447. Patented May 1, 1866.



No. 150.
Thatcher Heating Co. et al.
vs.
Burtis et al.
p. 511

Witnesses;
Robt Van Dewater
Robt Hastings

Inventors;
Joshua Van Worner
Michael McCarvey

self-feeding coal stoves; and we declare the following specification, with the drawings forming part thereof, to be a full and complete description of our invention.

Figure 1 represents a hall stove in central vertical section, showing the interior construction and operation of the stove; Fig. 2, the stove in perspective, with the hither half of the outer shell removed, but the magazine or fire-pot shown entire.

Similar letters denote the same parts of the apparatus.

A is the outer shell; B, the fire-pot; C, the ash-pit; E, the downward-draft flue; F, the base-flue; G, the grate; H, the nozzle for the smoke-pipe; J, the door; K, the magazine; W, the opening at the top for the passage of coal to the magazine.

The first improvement regards the magazine or feeder for the coal, intended to regulate the supply of fuel to the grate in larger or smaller quantities, and is effected by so arranging the magazine that it can be lowered or raised so as to bring its open bottom to or from the body of coal burning on the grate. This may be done by various devices, the method of doing it not being essential. The arrangement we employ is thus: The magazine K is a cylinder of sheet-iron, open at both ends, the lower end being slightly contracted, as shown. L is a second cylinder of sheet-iron surrounding the magazine K, and just so much larger than it as to permit K to move freely within it. Cylinder L is secured to the shell A by braces (two of them, M, being shown), so as to support the weight of the magazine with its load of coal. From the opposite side of K project two pins, *p*, intended for its support upon cylinder L. For the reception of these pins there is in the upper part of L, extending downward, grooves or channels N, cut vertically and horizontally in alternate steps, as shown in Fig. 1, so that when the pins *p* rest in the horizontal grooves, by turning the magazine slightly to the right or left hand it can be raised or lowered through a vertical groove and the pins placed within other horizontal grooves. To provide for the supplying of coal to the magazine through the opening P at the top of the stove without allowing the escape of fumes from the smoke-flues around the magazine, this device is employed. There extends downward from W a cylinder, P, open at top and bottom, of less diameter than K, and P passes down into K through an opening in its top sheet, R, which fits snugly around it, so that the movement of the magazine upward or downward will uncover no opening at its top into the body of the stove. The magazine itself might be carried through the top plate of the stove, but that would be an unsightly arrangement.

It will be seen that there may be variations in the proportions of this arrangement. The cylinder P might be continued downward a considerable distance, thus becoming the magazine, and the sliding part K be proportionately reduced, so that only the lower section of the magazine would be movable; or if it be not deemed worth while to retain the radiating-chamber between the magazine and the outer shell of stove, the whole upper part of the stove might be used for a magazine with a movable lower section or mouth-piece.

The second improvement is in the combination, with the above-described self-feeding apparatus, of the arrangement of the fire-pot B, as shown, so that the flame and gases shall have an uninterrupted passage over the entire upper edge of the pot downward into the flues E, being the entire space between the pot and the outer shell, B, of the stove, and thence down into a base-flue, F, being the entire base-chamber not occupied by the ash-pit D, and thence out through the nozzle H.

The advantages of the above construction of stove are as follows:

First. The adjustable feeder affords the means of regulating the size of the fire to meet the changes of temperature in the weather or any exigency requiring a varying amount of heat from the stove. It also permits the use of coals of various sizes by regulating the quantity of the supply in proportion to the size of the coal, whereas a fixed feeder being adjusted for the use of some one-sized coal makes the employment of a larger or lesser size an uneconomical as well as an inconvenient matter.

513 Second. The continuous-flue arrangement instead of that of separate flues at intervals around the stove, as now used in self-feeding stoves, secures a more equable and perfect combustion of all the coal in the fire-pot and consequent uniform distribution of heat to the radiating-surface of the stove, for wherever separate flues are used the masses of coal lying in the intervals between the flues and out of the range of the lines of draft from the grate to the flues remain unburnt, occupying much room without contributing to the heating of the stove.

Third. The mode of attaching the feeder, as shown, in combination with the free downward draft of the continuous-flue arrangement, not only prevents the escape of gas and smoke when the feeder is being supplied with coal, but produces a constant downward draft through the feeder and in the chamber around it, preventing any accumulation of gas in the chamber, which constantly occurs with the ordinary flue arrangement of self-feeding stoves, and, unless great caution be exercised in the process of supplying fuel, results in disastrous explosions upon the union of the atmospheric air with the gas.

What we claim, and desire to secure by letters patent, is—

1. An adjustable feeder whereby the supply of coal may be increased or diminished by raising or lowering the mouth of the feeder from or toward the grate of a stove, substantially as described, and for the purposes set forth.

2. The combination of an open flue, extending entirely around the fire-pot and the outer shell of the stove, with a magazine-feeder, as described, and for the purposes set forth.

JASPER VAN WORMER,
MICHAEL McGARVEY,

Witnesses:

RICH'D VARICK DE WITT,
ROB'T HASTINGS.

513½ U. S. Circuit Court, South. Dist. of New York. In Equity.

THATCHER HEATING CO. *et al. vs.* JOHN H. BURTIS *et al.*

It is hereby stipulated and agreed that the annexed printed copy of the depositions of witnesses taken herein on behalf of the defendants, and the exhibits thereto annexed, may be filed for and in place of the original depositions and exhibits, and may be referred to at the final hearing herein with the same force and effect as if said printed copy were such original deposition and exhibits, subject to correction of typographical and clerical errors.

Dated April 22, 1882.

B. F. LEE,
For Compl'ts.
A. J. TODD,
Counsel for Def'ts.

On reading and filing the foregoing stipulation it is ordered accordingly.

WM. J. WALLACE.

(Endorsed:) U. S. circuit court. Filed May 10, 1882. Joseph M. Deuel, clerk.

514 At a stated term of the circuit court of the United States of America for the southern district of New York, in the second circuit, held at the United States court-rooms in the city of New York, on Wednesday, the seventeenth day of May, in the year of our Lord one thousand eight hundred and eighty-two.

Present: The Honorable William J. Wallace, circuit judge.

THATCHER HEATING COMPANY *vs.* JOHN H. BURTIS *et al.* } (No. 3 on Equity Cal.)

The above cause coming on for final hearing upon pleadings and proofs, Mr. B. F. Lee is heard in behalf of complainant.

(Further argument adj'n'd to 18th inst.)

515 THURSDAY, *May 18th*, 1882.

The court meets pursuant to adjournment and is opened by proclamation.

Present: Hon. William J. Wallace, circuit judge.

THATCHER HEATING COMPANY *vs.* JOHN H. BURTIS *et al.*

Argument being resumed in the above cause pursuant to adjournment, Mr. B. F. Lee concludes the opening argument in behalf of complainant; Mr. Andrew J. Todd is heard in behalf of defendants.

(Adjourned to the 20th inst. at 10 a. m.)

516 SATURDAY, *May 20th*, 1882.

The court meets pursuant to adjournment and is opened by proclamation.

Present: Hon. William J. Wallace, circuit judge.

THATCHER HEATING COMPANY *vs.* JOHN H. BURTIS *et al.*

Argument on final hearing in the above cause being this day resumed pursuant to adjournment, Mr. B. F. Lee concludes his argument in behalf of the complainant. C. A. V.

517 United States Circuit Court, Southern District of New York.

THE THATCHER HEATING COMPANY *et al.*

vs.

JOHN H. BURTIS and Ano'r.

WALLACE, *J.*:

This action involves the validity of the first and second claims of the letters patent issued to John M. Thatcher for an improvement in fire-place heaters, bearing date June 14, 1870. It is conceded that these claims are to be construed broadly, so as to cover the combination of a fire-place heater having a body projecting outwards from the mantel or frame, and a furnace-like portion in the chimney behind the mantel, with a fuel receptacle within the cylinder of the heater, which will preserve a supply of unignited coal while the heater is in operation, and an opening through which the magazine can be fed from above, the magazine extending to this opening. Inasmuch as the heater was old, and the fuel receptacle with the described opening was old when located within an ordinary coal stove, what Thatcher accomplished was merely the advantageous location of the fuel receptacle within the fire-place heater. As the
518 complainants' expert, Mr. Brevoort, states: "The problem Thatcher had before him was to place the fuel magazine within the Bibb & Augee heater."

It must be conceded that it was not obvious that such a fuel magazine could be advantageously employed in such a heater. Attempts had been made by others to do the same thing without satisfactory result, but Thatcher's organization was a success, and immediately commended itself to the public. But Thatcher's broad claims cannot be sustained. There may have been patentable novelty in the means he employed to adjust the parts in the new organization, but there was none in merely bringing those parts together. They did not perform any new function in the new arrangement. The fuel magazine does just the same work in the new structure it did in the ordinary coal-stove. All the other parts of the fire-place heater operate precisely as they would if the ordinary fuel pot were used instead of the substituted magazine. The parts do not co-operate to produce a new result. By their aggregation the new structure contains all the advantages which resided before separately in several structures. The new heater is therefore a better heater than

any which preceded it, but it does not present a patentable
519 combination, irrespective of the means employed to adjust the several parts into efficient relations to each other.

As, concededly, the claims of the patent are not to be limited to any such combination, they must be held void for want of patentable novelty.

The bill is dismissed with costs.

(Endorsed:) U. S. circuit court. Filed May 27, 1882. Joseph M. Deuel, clerk.

520 At a stated term of the circuit court of the United States of America for the southern district of New York, in the second circuit, held at the United States court-rooms in the city of New York, on the second day of June, in the year of our Lord one thousand eight hundred and eighty-two.

Present: The Honorable William J. Wallace, circuit judge.

THE THATCHER HEATING COMPANY, DAVID STUART, RICHARD PETERSON, BENTLEY C. BIBB, and SAMUEL B. SEXTON

vs.

JOHN H. BURTIS and JOHN M. GRAFF.

This cause having come on to be heard upon the bill of complaint, answer, and replication herein, and the proofs, oral, documentary, and written, taken and filed in said cause, and having been argued by B. F. Lee, counsel for the complainants, and by A. J. Todd, counsel for the defendants—

Now, therefore, on consideration thereof, on motion of A. J. Todd, counsel for defendants, it is hereby ordered, adjudged, and decreed, and the court doth hereby order, adjudge, and decree, that the first and second claims of the letters patent numbered 104,376,
521 patented June 14, 1870, to John M. Thatcher, for improvement in fire-place heaters, and upon which this suit is brought, are not good and valid claims; that the invention embraced in and forming the subject-matter of said two claims is wanting in patentable novelty, and that no claim for infringement of said letters patent can be sustained by the complainants against these defendants.

And it is further ordered, adjudged, and decreed that the bill of complaint against the defendants be dismissed; and also that the said defendants do recover of the complainants their costs and charges and disbursements in this suit, to be taxed by the clerk of this court, and that the said defendants have execution therefor.

(Signed) WM. J. WALLACE.

522 United States Circuit Court, Southern District of New York.

THE THATCHER HEATING COMPANY *et al.*
vs.
JOHN H. BURTIS *et al.*

It is hereby stipulated and consented that the clerk of this court send all of the model exhibits and patent exhibits used on the final hearing in this case to the clerk of the United States Supreme Court, at Washington, D. C., to be used at the hearing of the appeal taken in this cause to the United States Supreme Court, at or about the date of the hearing of said appeal, and that the clerk of the United States Supreme Court be requested to return such exhibits to the clerk of this court after the decision of such appeal.

New York, Oct. 10, 1883.

F. C. BOWMAN,
Compl'ts' Sol'r.
A. J. TODD,
Def'ts' Sol'r.

Ordered accordingly.
Oct. 11th, 1883.
A. B.

Endorsed: U. S. circuit court. Filed Oct. 11, 1883. Timothy Griffith, clerk.

523 United States Circuit Court, Southern District of New York.

THE THATCHER HEATING COMPANY *et als.*
vs.
JOHN H. BURTIS *et al.*

We hereby consent that the foregoing papers shall constitute the record to be sent by the clerk of the circuit court of the United States for the southern district of New York to the U. S. Supreme Court on the appeal to said Supreme Court in the above-entitled cause.

New York, Oct. 10, 1883.

F. C. BOWMAN,
Compl'ts' Sol'r.
A. J. TODD,
Def'ts' Sol'r.

Endorsed: U. S. circuit court. Filed Oct. 10, 1883. Timothy Griffith, clerk.

524 U. S. Circuit Court, Southern District of New York.

THE THATCHER HEATING COMPANY, DAVID STUART, RICHARD PETERSON, BENTLEY C. BIBB, and SAMUEL B. SEXTON
against
JOHN H. BURTIS and JOHN M. GRAFF.

From the decree heretofore entered herein, dismissing the bill in this cause and directing the recovery of costs in favor of the de-

fendants and against the plaintiffs, the said plaintiffs, in open court, claim an appeal to the Supreme Court of the United States and give good and sufficient security to answer all damages and costs if they fail to make their plea good, which said security being approved by the said court, said appeal is allowed accordingly.

Dated the eighteenth day of May, 1883.

WM. J. WALLACE.

Approved as to form May 29, 1883.

A. J. TODD,
Sol'r for Def't.

SOUTHERN DISTRICT OF NEW YORK, } ss:
City and County of New York, }

James F. Horan, being duly sworn, says that he is of lawful age and resides in the city of New York; that on the 12th day of June, 1883, at No. 261 Broadway, in the city of New York, he served the within on A. J. Todd, Esq., solicitor for the defendants, by
525 delivering a copy of the same to a person in charge of said solicitor's office and leaving the same with him, said solicitor being absent from his said office at the time.

JAMES F. HORAN.

Sworn to before me this 13th day of June, 1883.

JOHN McCLURE,
Notary Public, N. Y. Co.

(Endorsed:) U. S. circuit court, southern district of New York. The Thatcher Heating Company *et al. vs.* John H. Burtis *et al.* Orig'l appeal in open court to the Supreme Court of the United States. U. S. court. Filed Oct. 8, 1883. Timothy Griffith, clerk.

526 Know all men by these presents that I, Robert A. Piper, of the city, county, and State of New York, am held and firmly bound unto John H. Burtis and John M. Graff, of the city, county, and State of New York, in the sum of thirteen hundred and fifty dollars, to be paid to the said John H. Burtis and John M. Graff, their executors, administrators, or assigns; for which payment, well and truly to be made, I bind myself, my heirs, executors, and administrators, by these presents.

Sealed with my seal and dated the 1st day of May, 1883.

Whereas at a circuit [court] of the United States within and for the southern district of New York, in a suit in equity pending in said court, between The Thatcher Heating Company, David Stuart, Richard Peterson, Bentley C. Bibb, and Samuel B. Sexton, complainants, and John W. Burtis and John M. Graff, defendants, a decree was rendered against the said complainants, and the said complainants having obtained an appeal to remove the said cause to the Supreme Court of the United States to reverse the decree in the aforesaid suit, and a citation directed to the said John H. Burtis and John M. Graff, citing and admonishing them and each of them to be and

appear at the October term, 1883, of the Supreme Court of the United States, to be held at Washington, to wit, on the second Monday of October, 1883:

Now, therefore, the condition of the above obligation is such that if the said Thatcher Heating Company, David Stuart, Richard Peterson, Bentley C. Bibb, and Samuel B. Sexton shall prosecute
527 their said appeal to effect and answer all damages and costs if they fail to make their plea good, then the above obligation to be null and void; otherwise to remain in full force and virtue.

R. A. PIPER. [SEAL.]

In the presence of—
JOHN McCLURE.

Word "thirteen," line 6, page 1, written over erasure before execution.

On this first day of May, 1883, before me personally came Robert A. Piper, to me known and known to me to be the individual described in and who executed the foregoing bond, and he acknowledges that he executed the same.

[SEAL.] JOHN McCLURE,
Notary Public, N. Y. Co.

On this first day of May, 1883, before me personally came Robert A. Piper, to me known, and being by me duly sworn, did depose and say that he resides at No. 23 Stuyvesant street, in the city of New York; that he is worth the sum of five thousand dollars and upwards, besides property exempt by law from execution, and over and above all his debts and liabilities, and is a householder in the State of New York.

[SEAL.] JOHN McCLURE,
Notary Public, N. Y. Co.

The foregoing bond is approved this 9th day of June, 1883.

WM. J. WALLACE.

Approved as to form and sufficiency this 29th day of May, 1883.

A. J. TODD,
Sol'r for Def'ts.

528 (Endorsed:) U. S. circuit court, southern district of New York. The Thatcher Heating Company *et al. vs.* John H. Burtis *et al.* Bond on appeal to the Supreme Court of the United States. Turner, Lee & McClure, solicitors for plaintiffs & appellants, 20 Nassau street, New York. U. S. circuit court. Filed June 9, 1883. Timothy Griffith, clerk.

529 By the Hon. William J. Wallace, one of the justices of the circuit court of the United States for the southern district of New York.

UNITED STATES OF AMERICA, *Southern District of New York,* } ss:

To John H. Burtis and John M. Graff, and to each of them, Greeting:

Whereas from the whole of the decree lately made by the circuit court of the United States for the southern district of New York, in a certain cause wherein The Thatcher Heating Company, David Stuart, Richard Peterson, Bentley C. Bibb, and Samuel B. Sexton were complainants and John H. Burtis and John M. Graff were defendants, the said complainants have appealed to the Supreme Court of the United States, and have taken their appeal in open court, and have given good and sufficient security to prosecute their said appeal to effect and answer all damages and costs:

Therefore you are hereby cited and admonished to be and appear at a Supreme Court of the United States to be holden at Washington on the second Monday of October, 1883, pursuant to said appeal, to show cause, if any there be, why the decree so appealed from as aforesaid should not be corrected and reversed, and why speedy justice should not be done to the parties in that behalf.

530 Witness the Hon. William J. Wallace, judge of said circuit court, at the city of New York, on this 9th day of June, 1883.

WM. J. WALLACE.

Approved as to form May 29, 1883.

A. J. TODD,
Sol'r for Def'ts.

SOUTHERN DISTRICT OF NEW YORK, *City and County of New York,* } ss:

James F. Horan, being duly sworn, says that he is of lawful age and resides in the city of New York; that on the 12th day of June, 1883, at No. 261 Broadway, in the city of New York, he served the within citation on appeal to the Supreme Court of the United States on A. J. Todd, Esq., solicitor for the defendants, by delivering a copy of the same to a person in charge of said solicitor's office and leaving the same with him, said solicitor being absent from his said office at the time.

JAMES F. HORAN.

Sworn to before me this 13th day of June, 1883.

JOHN McCLURE,
Notary Public, N. Y. Co.

(Endorsed:) U. S. circuit court, southern district of New York. The Thatcher Heating Company *et al. vs.* John H. Burtis *et al.* Orig'l citation on appeal to the Supreme Court of the United States. U. S. circuit court. Filed Oct. 8, 1883. Timothy Griffith, clerk.

531 UNITED STATES OF AMERICA, } ss:
Southern District of New York, }

I, Timothy Griffith, clerk of the circuit court of the United States of America for the southern district of New York, in the second circuit, do hereby certify that the foregoing pages, numbered from one to five hundred and thirty, inclusive, contain a true and complete transcript of the record and proceedings had in said court in the case of The Thatcher Heating Company, David Stuart, Richard Peterson, Bentley C. Bibb, and Samuel B. Sexton, complainants & appellants, against John H. Burtis and John M. Graff, defendants & appellees, as the same remains of record and on file in said office.

In testimony whereof I have caused the seal of the said court to be hereunto affixed, at the city of New York, in the southern district of New York, in the second circuit, this 11th day of October, in the year of our Lord one thousand eight hundred and eighty-three, and of the Independence of the said United States the one hundred and eighth.

[Seal of U. S. Circuit Court, Southern District of New York.]

TIMOTHY GRIFFITH, *Clerk.*

Endorsed on cover: S. New York C. C. U. S. No. 150. The Thatcher Heating Company, David Stuart, Richard Peterson, Bentley C. Bibb, and Samuel B. Sexton, appellants, *vs.* John H. Burtis and John M. Graff. Filed 12th October, 1883

121-286

Supreme Court of the United States.

OCTOBER, 1886, TERM—No. 150.

THE THATCHER HEATING COMPANY, DAVID STUART, RICHARD PETERSON, BENTLEY C. BIBB AND SAMUEL B. SEXTON, APPELLANTS,

vs.

JOHN H. BURTIS AND JOHN M. GRAFF.

Brief for Appellants.

B. F. LEE,
of Counsel.

M. B. Brown, Printer and Stationer, 49 & 51 Park Place, N. Y

Supreme Court,

OF THE UNITED STATES.

THE THATCHER HEATING COMPANY, DAVID STUART, RICHARD PETERSON, BENTLEY C. BIBB and SAMUEL B. SEXTON,

vs.

JOHN H. BURTIS and JOHN M. GRAFF.

BRIEF FOR APPELLANTS.

Statement of the Case.

This is an appeal from a decree of the Circuit Court of the United States for the Southern District of New York, dismissing the complainant's bill, entered on June 2, 1882, (p. 321).

The opinion of the Court below is very short, and after a brief explanation of the facts to which it refers, we will quote it in full.

The bill was filed on the 13th day of December, 1875, for infringment of Letters Patent of the United States, dated June 14, 1870, No. 104,376, granted to John M.

Thatcher, for a new and useful improvement in fireplace heaters (pp. 1–5). The patent will be found at pp. 17–20. The first and second claims are alone involved in this controversy.

"Complainants' Exhibit Thatcher Model," is a certified duplicate of the model filed in the Patent Office on the application for the patent, and correctly represents the thing patented (pp. 39, 63).

"Defendants' Exhibit, Burtis & Graff Fireplace "Heater" is a specimen of the infringing goods (pp. 308–309).

The claims in controversy will be readily understood by reference to the Thatcher model. They are as follows (p. 20):

1. A base-burning, fire-place stove, in which are combined the following elements, namely, A cylinder or body projecting outward from the mantel or frame, a fuel magazine or feeder within the cylinder, and an opening through which the said magazine can be fed from above.

2. A fireplace stove or heater, in which the magazine is extended to the feed-opening of the outer casing.

THE ANSWER.

1. Denies novelty, (p. 6).

2. Sets up anticipation by certain patents and printed publications (pp. 7–9, 11–12).

3. Prior use and knowledge by certain persons named (pp. 9–10, 12).

4. Alleges that Jordan L. Mott, of the City of New York, originated and reduced said invention and every substantial and material part thereof, to practice in the form of an operative device, and that "the said "Thatcher subsequently applied for Letters Patent,

" and surreptitiously and unjustly obtained Letters " Patent therefor " (p. 10).

5. Alleges that the said Letters Patent " described old and well-known measures as applicable to alleged, but not in fact, new uses, and that the application to said alleged new uses is not invention and is not patentable " (p. 11).

The answer does not deny infringement.

The only really important question in this case is whether the subject-matter of the two claims in controversy involved invention.

THE STATE OF THE ART AND NATURE OF THE INVENTION.

The words " outstanding stove " in this record are used to designate an ordinary stove standing in a room which it is designed to heat.

Fireplace heaters were first introduced, in Baltimore, by Mr. John H. B. Latrobe of that city, about the year 1852. They became commonly known as " Latrobes " or " Baltimore heaters " (pp. 182–183).

A fireplace heater burns anthracite coal. It is particularly adapted for a city house of the ordinary construction (p. 76).

It is placed in the fireplace of one of the lower rooms of the house, the back part being behind the mantel frame, while the front part extends into the room; the front of the heater is designed to heat the room in which it stands, while the back part of the heater is designed to heat rooms above.

It is very commonly used in a four-story house for the purpose of heating rooms in all three of the stories above it, as well as the room in which it stands (p. 76).

This is accomplished by having the rear of the apparatus constructed with large radiating surfaces, as

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It is very commonly used in a four-story house for the purpose of heating rooms in all three of the stories above it, as well as the room in which it stands (p. 76).

This is accomplished by having the rear of the apparatus constructed with large radiating surfaces, as

in ordinary hot-air furnaces, and by using the chimney flue as a conduit for fresh, pure air, heated by the furnace-like surface, the products of combustion, being carried off by a pipe within the flue. The opening of a mantel in an ordinary city house is about two feet to two feet four inches wide, and about two feet four inches high, and this fact makes it necessary to construct the apparatus so that it shall be adapted to these limits. Owing to the necessarily small compass within which it must act, *more is required of it than of any other heating apparatus made* (pp. 72–75)

In the operation of a fireplace heater, the chief difficulty is to heat the lowest room (p. 75).

Such "an apparatus to be practically useful to go "into the mantel of a fireplace must be of a *twofold* "*nature—a stove and a furnace combined*" (p. 81, x-*Q.* 56).

Fuel magazines or feeders were introduced into outstanding stoves at an early date, consisting of a cylindrical fuel-holder extending from the top downward into the combustion chamber of the stove. The magazine, or feeder, was designed to contain a supply of fuel, which was gradually discharged through its mouth, upon the top of the fire, as fast as the combustion deprived it of support, the weight of the coal thus serving to feed the stove as fast as fuel was wanted. This insured a steady, uniform fire, the only attention required being to occasionally fill the magazine full of coal.

Such stoves were frequently called "base-burning stoves," or "base-burners," because the fuel was fed from the magazine, and became ignited at its base, the fuel above not being ignited.

Of course, a large portion of the cylinder, or body of the stove was filled with unignited fuel, contained in the magazine. This, however, did not practically interfere with the operation of the outstanding stove. The stove, being effective on all sides to heat the room

in which it stood, its capacity was sufficient even under this construction.

Magazines had been common in outstanding stoves for many years, before any attempt was made to use a fuel receptacle of any kind, in a Baltimore heater. In view of the amount of work required of the latter, and of its acting within so small a compass, it was supposed by those skilled in the art, that its combustion chamber could not be occupied by a magazine, holding a reserve of unignited fuel, without preventing it from satisfactorily doing the work of warming the room, in which it was set up, as well as those in the stories above (p. 75).

In fact, it is no exaggeration to say, that, from the time of the introduction of the Baltimore heater (1852) to the date of Thatcher's invention (1866), it was *deemed obvious, and a matter of common knowledge among those skilled in the art, that a magazine like Thatcher's, extending to the outer casing, was not practically applicable to a fireplace heater.*

The proofs on this subject are clear and convincing, and will be considered in detail hereafter.

The Court below substantially agreed with us on this point.

In 1859, S. B. Sexton first introduced a fuel receptacle of any kind into a fireplace heater. This structure is shown in his patent, dated April 19, 1859, and is marked H in the drawing of the patent (p. 129).

The timidity, with which the problem, that Thatcher afterward solved, was approached, is shown in the construction of Sexton's pot H.

A similar fuel receptacle was also introduced by Bibb & Augee, in the fireplace heater, shown in their patent, dated April 30th, 1861, the same being there designated as "a pot Q" (p. 127).

This structure also shows a like timidity in coping with the problem to be solved.

Specimens of these structures are in evidence as Complainant's Exhibits "Sexton Fireplace Heater" and "Bibb & Augee Fireplace Heater," but the drawings of the patents, put in evidence by defendants (pp 218, 127) clearly show the structures. Imperfect as it was, the Bibb & Augee Heater was extensively used prior to Thatcher's invention.

In these Baltimore heaters the fuel receptacle was so constructed that the combustion took place *not only below and around it, but above it, and in that way the fuel became incandescent* (pp. 67–70), and thus the heating capacity of the apparatus was not impaired. The *ignited fuel, within the receptacle or fuel pot, rapidly destroyed it, and its cover* (pp. 67–70). As soon as the cover became at all loose or warped, the draft went through the pot, *because the receptacle did not extend to the feed opening of the outer casing* (pp. 67–70). We shall have occasion to describe these structures more in detail hereafter. These are the structures which are disclaimed in the patent (pp. 72, 20).

Thatcher made his invention in or prior to October, 1866 (p. 29), and at some time prior to April 14, 1867, he constructed his Patent Office model, a duplicate of which is in evidence, marked "Complainant's Exhibit, Thatcher's Model" (pp. 27, 39, 63, 64), and the completed fireplace heater, made like the model, was set up, and put in operation, with a fire in it, in September, 1867 (pp. 28, 64). Thatcher made oath to his specification March 17, 1868 (p. 40), and the application was filed in the Patent Office, March 24, 1868 (p. 63).

Upon the introduction into public use of the improved magazine fireplace heater, it was highly appreciated by the public (pp. 73, 74), and, as is not uncommon where a really important and very valuable invention is made, a large number of claimants to it sprang

up, and the applicant was placed in interference with them (pp. 56, 59, 131, 134, 136, 138, 143).

Owing to its great importance, and the large number of applicants, it was known in the Patent Office as the "BIG INTERFERENCE," (p. 143) The improved magazine fireplace heaters, made under the patent, have been introduced into public use, by tens of thousands (pp. 73, 74).

Experience has shown, that Thatcher's improved fireplace heater leaves nothing, to be desired in such a structure. The part, projecting into the room in front of the mantel or frame, as well as the radiating surface behind the frame, is kept highly heated, by the direct contact of the products of combustion, that circulate around the base of the magazine, and pass upward against the sides of the heater, on their way to the chimney. The constant supply of fuel from the magazine, as the fire burns, produces a uniform supply of hot air, for the upper rooms, which is easily controlled by those in the rooms, by the ordinary registers, used for furnaces. This is entirely new.

It is not feasible, for those occupying the rooms, other, than that in which the fireplace heater stands, to regulate the fire, and thus, by varying the combustion, regulate the heat, utilized in the rooms above. For this reason, *uniformity of combustion, to produce uniform generation of heat, is of special importance, in a fireplace heater* (pp. 72–74).

With the foregoing explanation, the language of the patent will be readily understood.

In the specification the invention is designated as "certain, new and useful improvements in fireplace heaters." The inventor says (pp. 18–20) :

My invention consists, first, of a base-burning fireplace stove, in which are combined the following ele-

ments, namely : a cylinder or body projecting outward from the mantel or frame, a fuel magazine or feeder within the said cylinder and an opening through which the said magazine can be fed from above. The object of this part of my invention is to increase the capacity of the fuel-magazine; secondly, of a base-burning fireplace stove or heater in which the magazine or feeder is extended to the feed-opening of the outer casing, so that there may be no open space across which to project the fuel on feeding the magazine.

* * * * * *

A more minute description of my improved heater than that given above will be unnecessary, as several of the parts described and illustrated in the drawings, form the subjects of other patents, and my present improvements relate especially to the top-feeding arrangement of a fireplace stove or heater. I will now refer more particularly to these improvements.

In constructing my improved heater I have so combined three elements or features as to produce an important result. These features are as follows: first, a cylinder or body of the heater projecting outward from the frame or mantel; second, a feeder or fuel-magazine within the cylinder; and, thirdly, an opening through which the said magazine can be fed from above.

While the fireplace stoves or heaters with protuberant cylinders and feeders or magazines were known prior to the date of my invention, I am not aware that the above combination of three features above referred to—namely, a top-feeding arrangement, a protuberant cylinder permitting such an arrangement, and a magazine within the cylinder—has ever been known or used prior to my invention of the same.

It has been the practice to so construct base burning fireplace stoves or heaters that the fuel had to be introduced into the feeder or magazine through a doorway in front; hence the magazine was of a very limited capacity. By so arranging the feed hole, however, that the fuel can be introduced into the magazine from above, the capacity of the magazine is increased—a result which I especially aimed at in adopting the first part of my invention, namely, the above-mentioned combination, and in the production of my top-feeding base burning fireplace stove.

The second part of my invention consists in extending the feeder or magazine to the feed hole of fireplace stoves. This not only increases the capacity of

the magazine to some extent, but an uninterrupted passage or guide is afforded for the introduction of fuel into the magazine through the opening in the outer casing.

* * * * * *

I claim—

1. A base-burning fireplace stove, in which are combined the following elements, namely: a cylinder or body projecting outward from the mantel or frame, a fuel-magazine or feeder within the cylinder, and an opening through which the said magazine can be fed from above.

2. A fireplace stove or heater, in which the magazine is extended to the feed-opening of the outer casting.

The first claim is for a combination of two elements: (1), a fireplace heater (such, for instance, as that shown in the Bibb & Augee patent, omitting the pot, Q), (p. 127) and (2) a feed magazine for unignited fuel extending to the top of the heater.

The second claim speaks for itself so clearly that its language need not be paraphrased. It is broader than the first claim, and consists likewise of two elements: (1) a fire-place heater; (2) a feed magazine for unignited fuel, extending to the feed opening of the outer casing, not necessarily at the top.

Thatcher's was the first fireplace heater which could properly be called a *base burning* fireplace heater, using the words "*base burning*" in their strict sense, or in other words, in which the fuel in the magazine became ignited at its base, *and at its base only.*

Upon this state of facts the following opinion was delivered (pp. 320–321).

THE OPINION OF THE COURT BELOW, AND COMMENTS UPON IT.

WALLACE, *J.:*

This action involves the validity of the first and second claims of the letters patent issued to John M. Thatcher, for an improvement in fireplace heaters, bearing date June 14, 1870.

It is conceded that these claims are to be construed broadly, so as to cover the combination of a fireplace heater, having a body projecting outward from the mantel or frame, and a furnace-like portion in the chimney behind the mantel, with a fuel receptacle within the cylinder of the heater, *which will preserve a supply of unignited coal while the heater is in operation*, and an opening through which the magazine can be fed from above, the magazine extending to this opening.

Inasmuch as the heater was old and the fuel receptacle with the described opening was old when located within an ordinary coal-stove, what Thatcher accomplished was merely the advantageous location of the fuel receptacle within the fireplace heater.

As the complainants' expert, Mr. Brevoort states, "the problem Thatcher had before him was to place the fuel magazine within the Bibb and Augee heater." *It must be conceded that it was not obvious that such a fuel magazine could be advantageously employed in such a heater. Attempts had been made by others to do the same thing without satisfactory results; but Thatcher's organization was a success, and immediately commended itself to the public.*

But Thatcher's broad claims cannot be sustained. There may have been patentable novelty in the means he employed to adjust the parts in the new organization, but there were none in merely bringing those parts together. They did not perform any new function in the new arrangement.

The fuel magazine does just the same work in the new structure it did in the ordinary coal-stove. All the other parts of the fireplace heater operate precisely as they would if the ordinary fuel-pot were used instead of the substituted magazine. The parts do not co-operate to produce a new result. By their aggregation, the new structure contains all the advantages which resided before separately in several structures. The new heater is therefore a better heater than any which preceded it; but it does not present a patentable combination irrespective of the means employed to adjust the several parts into efficient relations to each other.

As concededly the claims of the patent are not to be limited to any such combination, they must be held void for want of patentable novelty.

The bill is dismissed with costs.

We have but few criticisms to make upon the facts found by the Circuit Judge, apart from his inferences.

Instead of saying "that it was not obvious that such "a fuel magazine could be advantageously employed in "such a heater," he might, indeed, have gone a step further and added that, prior to Thatcher's invention, those skilled in the art considered it obvious and a matter of common knowledge, that it *could not be so used.* Having found that the use of such a fuel magazine in such a heater was a valuable improvement, and was not obvious, he should have found that such use was a "*new use*," not a "*double use*," and therefore patentable, whether the fuel magazine did or "did not per-"form any new function in the new arrangement." In other words, that it was a new article of manufacture, *a fireplace heater, containing a magazine, extending to the outer casing of the heater, capable of holding a supply of unignited coal, and feeding the same to the fire.*

It was sufficient, to support the patent, that Thatcher should have found out that this magazine was useful in its new situation, and that its use in its new situation was not obvious to those skilled in the art. In other words, as the opinion itself conceded, *Thatcher succeeded in making a heater better than any that had gone before it,* by doing something that "was not obvious" (p. 320) to those skilled in the art; therefore what he did involved *invention,* as distinguished from mere mechanical skill.

The learned Judge was also mistaken in saying, that "the parts in the new organization * * * did not "perform any new function in the new arrangement."

As regards the fireplace heaters, the magazine did perform a new function, because its use was never before known in such structures.

All that was necessary was, that it should perform a *function hitherto unknown in a fireplace heater,* and this it unquestionably did.

It being conceded that, although a similar magazine had previously existed in an outstanding stove, it was not, therefore, obvious that the same magazine could

be put into a fireplace heater, it must follow, that it was a novel and patentable combination, to unite such a magazine with a fireplace heater.

We presume it will not be disputed, that the combination of an outstanding stove with such a magazine, when it was first made, was obviously patentable.

It produced new results of value. It gave a constant and regular supply of fuel; it secured regularity of combustion, and was cleanly, economical, and required but little attention.

To produce such a result would be equally patentable in a fireplace heater, provided the use of such a magazine, in a fireplace heater, was not obvious, on account of any supposed similarity of the two objects. This the Court has found, and the evidence conclusively shows, was not the case.

The learned Judge was also in error in finding that "the parts do not co-operate to produce a new result." So far as the fireplace heater is concerned, they do produce a new result, and one that has been highly appreciated by the public.

It was new and highly prized to have a fireplace heater at last, that would give a uniform and steady heat—that could be regulated, for their own purposes, by the occupants of the upper rooms, heated by means of the furnace registers.

As regards the lowest room, it was also new, to have a fireplace heater, that gave out a steady and uniform heat, and that did not require frequent attention, and that was cleanly.

Again the Court says: "By their *aggregation* the "new structure contains all the advantages which re-"sided before separately in several structures. The "new heater is therefore a better heater than any "which preceded it."

If it were a mere case of aggregation, the parts could be separated and the same result would be accomplished by using each independently.

Take, for instance, the rubber-tipped pencil in *Reckendorfer* vs. *Faber*, 92 *U. S.*, 347. Cut off the rubber end from the lead end of the pencil, and you have two pieces with which you can accomplish precisely what you would have accomplished, if they had remained in one piece. Their union was held to be an aggregation.

Separate the various parts of the Thatcher Fireplace Heater, and the whole apparatus will cease to work as it did before. The efficiency of the whole depends for its action, upon *one fire, fed by one magazine.*

In the case at bar, it is obviously impossible to produce the same results, by the independent use of the different parts, that is produced when the parts are combined. It is their union that makes them efficient. Therefore it is a case of a combination, resulting in a new article of manufacture, producing a valuable result, which cannot be produced if the combination is broken, and not a case of aggregation, where the same result can be obtained, by the independent use of the different parts, so disconnected.

But we can go much further. When the Court says that the new structure contains, by an aggregation of parts, "the advantages which resided before separately in several structures," the inevitable inference is that by the independent use of the several structures, in which these "advantages" reside, the same results can be obtained.

The results attained by Thatcher can never be attained by the independent use of any number of structures, which existed prior to Thatcher. Put the Bibb & Augee fireplace heater, and a base-burning stove side by side, and let them act independently and the results attained by Thatcher are not reached by their independent action.

Even if it were otherwise, such a fact would not be fatal to the claim of invention. The Bibb & Augee heater and the base-burning stove together contain many elements, which Thatcher's heater does not. It required an analysis of both the Bibb & Augee heater and the base-burning stove—a separation of the parts of each, which were united in efficient union, and an appreciation, that, when thus separated, *a new and much more efficient union* could be made between the Bibb & Augee heater, with one of its elements omitted, and an element of the base-burning stove, discarding the remaining elements of both.

This Thatcher did, and this the proofs show, and the Court has found, was not obvious.

It would have involved invention, even though Thatcher's heater did nothing more, than resulted from the independent action of other pre-existing structures, because it dispensed with elements, which existed in the two together.

Much more did it involve invention when Thatcher's structure attained results, impossible of attainment by the independent action of structures, which before existed.

Assignment of Errors.

The appellants specify the following errors upon which they rely, and in regard to which the decree is alleged to be erroneous:

1. In that the Court below decreed that the invention embracing and forming the subject-matter of the first claim of letters patent No. 104,376, patented June 14, 1870, to John M. Thatcher, is wanting in patentable novelty.

2. In that the Court below decreed that the invention embracing and forming the subject-matter of the second claim of letters patent No. 104,376, patented June 14, 1870, to John M. Thatcher, is wanting in patentable novelty.

3. In that the Court below decreed that no claim for infringement of the first claim of said letters patent can be sustained by the appellants against the appellees.

4. In that the Court below decreed that no claim for infringement of the second claim of said letters patent can be sustained by the appellants against the appellees.

5. In that the Court below decreed that the bill of complaint filed by the appellants against the appellees be dismissed, and that the appellees recover of the appellants their costs, charges and disbursements, to be taxed by the Clerk of the Court below, and that said appellees have execution therefor.

6. In that the Court below did not adjudge the first and second claims of said letters patent to be valid, and that the appellees had infringed the same, and in that it did not enter the usual decree for injunction, and account of profits and damages with costs in favor of the appellants.

All these assignments of error, virtually involve but one question, and that is whether the improvements of Thatcher involved invention.

In the brief of the argument, we shall endeavor to show that the Court below erred in holding that Thatcher's improvements were not patentable, and we shall also consider briefly the other grounds of attack upon the appellants' position, all of which were decided in our favor by the Court below.

Brief of the Argument.

In giving the Court a correct statement of the question involved in this appeal, it has been necessary, incidentally to state many of the leading facts, and upon some points, it will be unnecessary to add anything.

We have already shown what was the nature of the complainant's invention, in view of the state of the art, and in what it consisted.

It now remains to discuss more fully the matters of fact and of law, which bear upon the questions, as to whether or not the improvement was an obvious one, in view of the state of the art, and whether it was an aggregation as distinguished from a combination.

As we have before stated, we consider this question of patentability the only debatable point in the case.

THE SUBJECT MATTER OF THE FIRST AND SECOND CLAIMS OF THATCHER'S PATENT INVOLVED INVENTION.

1. *It was not an obvious thing to those skilled in the art, to devise a fireplace heater, in which the magazine is extended to the feed opening of the outer casing.*

Defendant's witness LESSTER, a manufacturer, testifies to having made fire-place heaters with such a magazine feed "about the year 1870" (p. 160), and that he would have applied for a patent, if he had appreciated the importance of the invention (p. 161).

The defendant's witness BUDD, tried to introduce a magazine, feeding from the top, into a fireplace heater,

and after constructing three or four heaters abandoned the experiment as a failure (p. 203).

After having stated that he burned anthracite coal in these heaters, he is asked (p. 203) :

x-Q. 32. "How many of them did you burn anthracite coal in and where and how long?"

A. "I can't say how long ; sufficient to prove a failure, "near Second avenue, One Hundred and Nineteenth "street; another at, I think, No. 244 West Fourth "street, this city. They were both taken up and re-"placed by others—the only experiments I have had."

He attributed the failure of these heaters to the presence of the magazine (p. 203).

JORDAN L. MOTT, another witness for defendants, testified to having manufactured and put a fire-place heater with the top-feed magazine into his own house somewhere about January or February, 1868, and that "*the object in placing it there was for trial.*" He considered that it required careful tests and experiments before finally adopting it (pp. 155, 38 and Exh. Mott Catalogue, p. 20).

Mott further says : "I tested this heater two winters "before putting them on the market" (p. 156).

In this connection, it may be well to state that Mott swears that he gave the idea of this heater to Burrows (p. 157). But he subsequently relinquished to Burrows all interest, that he might have in the patent upon this invention for which Burrows had applied, by a written instrument, in which he disclaimed the invention himself, in favor of Burrows (p. 145).

The importance of the improvement is proved beyond question by the large number of persons who applied for a patent thereon. The trade appreciated its great importance.

The interference declared was appropriately spoken of in the Patent Office as the "BIG INTERFERENCE" * (p. 143).

Mr. Brevoort, the plaintiff's expert tersely summarizes the bearing of those facts upon the question, we are considering, thus (p. 120):

"The problem, which Thatcher had before him, was to place the magazine of his patent, within the Bibb & Augee fireplace heater, or, rather, his invention may be said to have consisted in the conception of the idea, of taking out the fuel chamber, or pot of the Bibb & Augee device, and substituting therefor a magazine of the kind, shown in the Thatcher patent, the execution of which conception, if successful, had for its object, to confer upon the fireplace heater the regularity and steadiness of action, which alone could be secured by the use of a magazine, standing ready always to automatically feed the fire, whenever it may become necessary. Now, it was not at all an obvious thing, that this large mass of unignited coal could be put within the comparatively limited compass, necessary for the ordinary fireplace heater, in place of the incandescent coal contained in the pot or fuel chamber of the Bibb & Augee heater, and still leave a heater which would be successful. Indeed, one of the defendant's witnesses in this case placed a magazine in a fireplace heater, tried it and abandoned it as useless, and as a positive injury rather than, as future experiments have shown, a great benefit to the structure. Another witness seems to have introduced a magazine into one of his fireplace heaters at about the date of Thatcher's patent. This witness says that he did not think it was important, but says that had he known anything of its importance he would have got a patent for it. These

* The parties to the interference were David Stuart and Richard Peterson, assignees of D. Stuart and L. Bridge, of Philadelphia; John M. Thatcher, of Bergen, N. J.; Abraham K. Sanders, of Brooklyn, N. Y.; David Stuart and Lewis Bridge, of Philadelphia; Bentley C. Bibb, of Baltimore; Samuel B. Sexton, of Baltimore; B. C. Bibb & P. Klotz, of Baltimore; Philip Klotz, of Baltimore; William Burrows, of Brooklyn, N. Y.; A. K. Sanders, of Brooklyn, N. Y.; John Martino, of Philadelphia; B. C. Bibb, of Baltimore, and Stuart & Peterson, of Philadelphia. The repetition of names which occurs indicates that the improvement was involved in different applications of the same persons (pp. 56-59, 138-142).

two witnesses clearly show that the putting of a magazine into a fireplace heater was not *obviously* a good method of improving the old Bibb & Augee heater; and that even after a magazine had been introduced, its utility was not manifest without experiment and careful trial; and this testimony is given by men who, apparently, were thoroughly skilled in the art, and had had much and long experience in the fireplace heater business."

The utility of Thatcher's improvement is most emphatically shown by its general introduction (pp. 73-75).

The evidence on this point is uncontradicted – Mr. Thatcher says:

Q. 13. Please state to what extent, in fireplace heaters, there has been introduced, since the issue of your patent, the combination of a cylinder or body, projecting outward from the mantel or frame, a fuel magazine or feeder within the cylinder, and an opening, through which the said magazine can be fed from above, as described in your patent, and how extensively fireplace heaters have, within that time, been made with magazines, extending to the feed opening of the outer casing, as described in your patent."

A. The *combination referred to has been introduced into nearly or quite everything that has been made; nine hundred and ninety-nine out of a thousand have been made, having their magazines feed from the top and through the outer casing.* The device was generally introduced very shortly after the patent was issued.

Q. 14. To what extent have the owners of the patent No. 104,376 introduced the device embraced in the claims in controversy in this suit into public use?

A. By the tens of thousands.

Q. 15. What, if any, outstanding stove was there, having a magazine, at the date of your invention, that could have been set up in a fireplace, so as to be made practically useful in that situation?

A. There was none.

Q. 16. In such structures as the fireplace heater, shown in your patent and "Defendants' Exhibit, Burtis

& Graff Fireplace Heater," what is the condition of the fuel in the magazine?

A. Unignited.

Q. 17. Where is a fireplace heater set up?

A. In front of and in the mantel of the room in which the heater is placed.

Q. 18. About what is the size of the opening of a mantel (such as you refer to in your last answer) in which the apparatus must go, that is to warm the room in which it is placed at the same time that it warms rooms above?

A. About 2 feet to 2 feet 4 wide and 2 feet 4 high.

Q. 19. What bearing does this fact have upon the construction of a fireplace heater?

A. It compels you to construct the apparatus adapted to these limits.

Q. 20. Considering the size of the apparatus and the necessarily small compass within which it must act, is much or little required of it?

A. More is required of it than any other heating apparatus made.

Q. 21. In view of the amount of work required of it, and of its acting within so small a compass, state whether or not, prior to your invention, it was supposed that a magazine to hold a reserve of unignited coal fed from above or through the outer casing was applicable to it and still enable it to satisfactorily do the required work of warming the room in which it was set up and at the same time satisfy those occupying the rooms above?

A. It was not.

Q. 22. Prior to the time of your invention, state in whose fireplace heaters a fuel receptacle had been introduced?

A. S. B. Sexton's and Bibb & Augee; specimens of each of those heaters are here as exhibits.

Where a particular result, long desired and sought, but never attained, has at last been achieved by means of great simplicity, the simplicity of the means will not prevent the subject-matter from being patentable. After the problem is solved it may seem that it could have been done by any one possessing technical skill, but the fact that it had been often previously sought without avail, will go to prove almost conclusively that invention was involved. Smith *vs.* The Goodyear

Dental Vulcanite Co., 93 U. S. 486, is a leading case in support of this proposition. In that case the Court says (p. 495):

"Undoubtedly the results or consequences of a process or manufacture may in some cases be regarded as of importance when the inquiry is whether the process or manufacture exhibits invention, thought and ingenuity. Webster, on the subject-matter of patents, p. 30, says: '*The utility of the change, as ascertained by its consequences, is the real practical test of the sufficiency of an invention; and since the one cannot exist without the other, the existence of the one may be presumed on proof of the existence of the other. Where the utility is proved to exist in any degree a sufficiency of invention to support the patent must be presumed.*' We do not say the single fact that a device has gone into general use, and has displaced other devices which had previously been employed for analogous uses, establishes in all cases that the later device involves a patentable invention. It may, however, always be considered; and *when the other facts in the case leave the question in doubt, it is sufficient to turn the scale.*"

Another leading case on this subject is Loom Co. *vs.* Higgins, 105 U. S. 580. This suit was founded upon Webster's patent for "improvement in looms," especially adapted for the weaving for carpets. Mr. Justice Bradley, in delivering the opinion of the Court, says (p. 591):

"It is further argued, however, that, supposing the devices to be sufficiently described, they do not show any invention; and that *the combination set forth in the fifth claim is a mere aggregation of old devices, already well known; and therefore it is not patentable. This argument would be sound if the combination claimed by Webster was an obvious one for attaining the advantage proposed—one which would occur to any mechanic skilled in the art. But it is plain from the evidence, and from the very fact that it was not sooner adopted and used, that it did not for years occur in this light to even the most skillful persons. It may have been under their very eyes, they may almost be said to have stumbled over it; but they certainly failed to see it, to estimate its value, and to bring it into notice.* Who *was* the first to see it, to

understand its value, to give it shape and form, to bring it into notice and urge its adoption, is a question to which we shall shortly give our attention. At this point we are constrained to say that *we cannot yield our assent to the argument that the combination of the different parts or elements for attaining the object in view was so obvious as to merit no title to invention. Now that it has succeeded, it may seem very plain to any one that he could have done it as well. This is often the case with inventions of the greatest merit.*"

The case of Consolidated Valve Co. *vs.* Crosby Valve Co., 113 U. S., 157, is also in point. Richardson, the patentee, had a patent for an improvement in steam safety valves. Numerous prior existing steam safety valves were put in evidence for the purpose of invalidating the patent, and the decree of the Circuit Court was against the inventor; but this Court, reversing the decree of the Circuit Court, held that the fact that the prior valves were not used, and the speedy and extensive adoption of Richardson's valve, supported the conclusion that the latter was novel, and patentable. Mr. Justice Blatchford, delivering the opinion of the Court, says (p. 179):

"*Richardson's invention brought to success what prior inventors had essayed and partly accomplished. He used some things which had been used before, but he added just that which was necessary to make the whole a practically valuable and economical apparatus.* The fact that the known valves were not used, and the speedy and extensive adoption of Richardson's valve, are facts in harmony with the evidence that his valve contains just what the prior valves lack, and go to support the conclusion at which we have arrived on the question of novelty."

See also

Winans *vs.* Denmead, 15 Howard, 330.
Gaylor *vs.* Wilder, 10 Howard, 477, 483, 3d exception, p. 484.

The facts in the case at bar bring it well within the principles that have been so clearly laid down in the three leading cases from which we have quoted.

Thatchers patent has been criticised, because the advantages of his new structure were not sufficiently specified therein. This, however, was not essential.

Smith *vs.* Goodyear Dental Vulcanite Co., 93 U. S., 486.

We are aware that in numerous recent cases, this Court has declared the patents therein involved to be void, as lacking in patentable novelty (Vinton *vs.* Hamilton, 104 U. S., 485; Hall *vs.* Macneale, 107 U. S., 90; Atlantic Works *vs.* Brady, 107 U. S., 192, 200; Slawson *vs.* Grand Street Railroad Co., 107 U. S., 649; King *vs.* Gallun, 109 U. S., 99; Double-Pointed Tack Co., *vs.* Two Rivers Manufacturing Co., 109 U. S., 117; Estey *vs.* Burdett 109 U. S., 633; Bussey *vs.* Excelsior Manufacturing Co., 110 U. S,, 131; Pennsylvania Railroad Co. *vs.* Locomotive Truck Co., 110 U. S., 490; Phillips *vs.* Detroit, 111 U. S., 604; Morris *vs.* McMillin, 112 U. S., 244; Hollister *vs.* Benedict Manufacturing Co., 113 U. S., 59; Thompson *vs.* Boisselier, 114 U. S., 1, 11; Stephenson *vs.* Brooklyn Railway Co., 114 U. S., 149; Yale Lock Manufacturing Co. *vs.* Greenleaf, 117 U. S., 554; Gardner *vs.* Herz, 118 U. S., 180; Clark Pomace Holder Co. *vs.* Ferguson, 37 O. G., 1479).

An extended review of these cases is unnecessary. In most of them the change from what had before existed was obvious, or of trivial importance.

But in none of the cases cited, or in any other in which this Court has held the patent void as lacking in patentable novelty, have the following conditions existed: (1) affirmative proof that the structure therein shown was of such a nature as not to be obvious to those skilled in the art, but, on the contrary, that it seemed obvious to them that such a structure could not be a practical success; (2) the necessity of experiment to demonstrate the success of the new structure; (3) the universal introduction of the improvement after it was made, thereby showing the keen apprecia-

tion by the trade and the public of the value of the improvement.

Add to this the number of those skilled in the art who appreciated the value of the invention, and endeavored to patent it for their own benefit, thus showing that those skilled in the art considered that it involved invention, and recognized its importance.

All these facts remove the Thatcher patent a long way from the criticisms and objections made to the patents involved in the cases just cited.

A non-analogous use, referable to invention, is a new use and is patentable, but an analogous use, referable to the skill of the workman, is a double use and not patentable.

The tests in determining whether a use is analogous or new are well summarized in

Merwin on Patentability of Inventions, § 92.

"We may sum up the principles which govern this class of cases as follows: (1). A non-analogous, *in other words a non-inferable or deducible,* use is patentable; (2.) Invention may be shown in the means, whereby the old contrivance is adapted to the new use, and the new use may be patentable on that account; (3.) Such means of adaption, though not implying invention, may tend to show that the new use is a non-analogous one; (4.) Experiments made to ascertain the practicability of the new use are strong evidence to prove that invention was required to conceive of it—in other words, that it is a non-analogous, and therefore patentable use."

Under the above tests, the first and fourth support Thatcher's claim to invention, while the second and third have no application.

NO QUESTION OF AGGREGATION IS INVOLVED IN THIS CASE.

Thatcher's whole invention is clearly expressed in his second claim. It needs no paraphrase or construction. The first claim is a narrower modification of the second.

Thatcher's invention consisted in introducing "a magazine extending to the feed opening of the outer casing," into a "fireplace stove or heater," which it was supposed by those skilled in the art could not be done, with a practically successful result.

The means that Thatcher employed to accomplish his result were simple. Into the cylinder or body of the heater projecting outward from the mantel, he introduced the fuel magazine so as to allow it to be fed through an opening in the upper part of the heater, in front of the mantel. The defendant's structure plainly accomplishes the same result by the same means, and this is probably the reason why the infringement is not denied in the answer.

The simplicity of the means, for accomplishing a result, is no objection to the validity of this patent.

Loom Co. *vs.* Higgins, 105 U. S., 580.
(See quotations from opinion *supra*).

In our criticisms upon the opinion of the Court below, we have already sufficiently marshaled the facts bearing upon this question, and we have clearly shown, that, under well-known rules of law, the facts show that Thatcher's improvement was a combination, making a new article of manufacture, a new structure, which accomplished valuable and novel results, which could not be attained by the separate use or action of its constituent parts, nor could such results be attained by the independent use or action of separate prior structures, even though the latter contained, in the aggre-

gate, many elements which Thatcher's structure did not. (see pp. 12–14, this Brief).

THE EVIDENCE FAILS TO SHOW ANTICIPATION OF THATCHER'S INVENTION.

As we have before shown, Thatcher made his invention as early as October, 1866, and made his model prior to April 14, 1867, and had his heater set up with fire in it in September, 1867. All objections entered upon the record, during the examination of the several witnesses, called for the purpose of proving the existence of structures claimed to anticipate Thatcher's invention, were insisted upon, in the Court below, and are still insisted upon.

STRUCTURES NOT EARLY ENOUGH TO ANTICIPATE.

None of these exhibits are referred to by defendant's expert.

1. *The Mott Fireplace Heater.*

William Burrows, a pattern maker, is the principal witness upon this topic. He states that in June or July, 1867, Jordan L. Mott, of the J. L. Mott Iron Works, employed him to make patterns for a magazine fireplace heater, for which he afterward made application for a patent, specifically claiming the combination of a top-feeding magazine with a fireplace heater (pp. 146–150, 149–150, x-*Q.* 19; 132, 143). He states that the drawings were completed prior to August 10, 1867, and he then commenced making the patterns, which were completed prior to November 18, 1867; and he produces "Defendants' Exhibit, Burrows No. 2," as a specimen of a heater made from the patterns. The patterns were made of wood (p. 152).

Jordan L. Mott states that these drawings and patterns were made by Burrows in the fall of 1867 (p. 155), and that castings were taken from the wood patterns in the latter part of 1867 or in January, 1868, and that

such castings were mounted and put into his house, and that some time "during cold weather, during the months of either January or February, 1868, they were used, immediately after being placed" in his house; that the castings so mounted constituted a complete fireplace heater, which operated in practice "very satisfactorily; *the object in placing it there was for trial.*" That the first heater that was sent from the foundry to the store was on May 27, 1868, and the next on June 22, 1868, both being sent for the use of Augustus F. Weeks, the president of the J. L. Mott Iron Works. Mott says: "*I tested this heater two winters before putting them on the market* (pp. 155–157).

Mott also states that he gave the idea to Burrows of this magazine fireplace heater (p. 157). On November 16, 1869, however, when Burrows was about to apply for a patent for this invention, and to sell the same to B. C. Bibb, of Baltimore, Jordan L. Mott executed a written instrument in these words:

"I, Jordan L. Mott, do hereby relinquish any right, title and interest which I might possibly have had in the invention assigned by this instrument of writing by William Burrows to Bentley C. Bibb, any interest which I might have had arising from William Burrows being my pattern maker, and not from any part taken by me as an inventor, for I took no such part therein" (p. 145).

This paper effectually disposes of the defense pleaded in the answer (p. 10) that Thatcher surreptitiously and unjustly obtained the patent for that which was originated and reduced to practice by Jordan L. Mott.

In the catalogue of the J. L. Mott Iron Works, marked, "Complainant's Exhibit Mott Catalogue," and bearing the imprint date 1871, this Mott Fireplace Heater is spoken of on page 20 thereof, as follows:

"After *two years* experience in *testing and perfecting* the Defiance Fireplace Heater, we now formally introduce it to the public" (p. 38).

If this statement is correct, 1869 would be the year in which the heater was first so far completed as to have been tested.

David Tompkins was also examined concerning this structure, and fixes the date when the patterns came to the J. L. Mott foundry as about December, 1867. He saw the heater in question in use in Mr. Mott's house, "rather towards springtime, 1868." It was like Exhibit Burrows No. 2 (pp. 161–164).

Even assuming that the witnesses Burrows, Mott and Tompkins, are correct as to their dates, they are all too late. Thatcher's invention dates back to October, 1866, his Patent Office model was made before April 14, 1867, the invention was put in practice in the early fall of 1867, he began regularly furnishing the heaters to his customers as early as February 7, 1868, and he had about twenty of them set up in houses on or before May 1, 1868 (pp. 27, 29, 64, 35). The evidence conclusively shows that Thatcher's invention is prior in date to that of Burrows, and that in "*The Big Interference*" in the Patent Office between Thatcher's application and those of Burrows' and many others, the invention in question was rightly found to belong to Thatcher (p. 143).

2. *The Fireplace Heaters manufactured by Budd.*

Joseph W. Budd testifies to the manufacture in 1859, by the firm of Thorp & Budd, of which Henry L. Budd was a member, of a heater marked "Defendant's Exhibit No. 1," called the Phœnix (p. 200). He also testifies that another fireplace heater marked "Exhibit Budd, No. 2," had been manufactured in New York since 1862 or 1863, by William H. Jackson & Son, and that the heaters like "Exhibit Budd No. 2," had continued to be sold to the present time (p. 201).

Exhibits Budd, Nos. 1 and 2, obviously do not contain the plaintiff's invention. We shall hereafter have

occasion to discuss these exhibits in connection with some others.

The witness also states that in 1872 he made a fireplace heater with a magazine feed suspended within the body or cylinder of the heater, with an opening in the top of the heater, the magazine extending to the opening in the top, so that coal could be fed into such magazine-feed from the top of the heater (p. 201). He states that he made three or four such heaters, and set them up and tried them by burning coal in them, and then abandoned the experiment as a failure (pp. 202, 203).

He attributes the failure to the presence of a magazine in the heater (p. 203, x-*Q.* 35). He had put in operation thousands of fireplace heaters (x-*Q.* 36).

3. *The Fireplace Heaters manufactured by Lesster.*

William C. Lesster states that in 1866 he made the heaters described in his patent No. 62,623, dated Jan. 29, 1867, in New York (p. 160), and he puts in evidence a specimen as "Defendant's Exhibit, Lesster, No. 1" (p. 161). He states that about the year 1870—but he is not certain as to the date—he made a fireplace heater with a top-feed magazine, with a slide, which was put in as an extra precaution on account of gas. He produces such a magazine feed and slide, with the portion of the heater cylinder into which the magazine feed was introduced, and they are marked "Defendant's Exhibit, Lesster No. 2." This magazine was introduced into a heater similar to the heater without a magazine, "Exhibit, Lesster No. 1" (pp. 160–161).

He says (p. 161):

Q. 9. At the time you introduced this magazine and top-feeding construction in your heater, was such construction well known to you; if so, when did you know of its existing?

A. I don't know of its existing anywhere.

Q. 10. You do not understand my question; I do

not ask you as to your heater existing with it previously, but whether you knew of a construction of magazine feed and hole in the top for introducing the coal into such magazine feed from the top, anywhere previous to your embodying it in your stove or heater, and if so, where?

A. I can't answer, because I don't know; I might have seen or might not, for I did not think anything of its *importance* when I made it, otherwise *I would have got a patent for it.*"

He then states that he knew previous to that time of the use of magazines in outstanding stoves (p. 161).

Both of the Exhibits introduced by Lesster disappeared before the hearing in the Court below, but they are of no importance, in view of Lesster's Patent, No. 62,623.

EXHIBITS CLAIMED TO BE PRIOR IN DATE TO THATCHER'S INVENTION, AND REFERRED TO BY DEFENDANTS' EXPERT.

4. *The American Heater.*

Robert Z. Liddle refers to a heater called the "American," manufactured by B. C. McCann & Co., in Brooklyn, as early as 1866, and speaks of it as "now present" (p. 272). *No such heater has ever been offered as an exhibit in the case*, although it is referred to by Hagan, defendants' expert, in his testimony.

A large number of patents, both of the United States and of Great Britain, were offered in evidence by the defendants for the purpose of anticipating Thatcher's invention. It will be convenient to consider the structures shown in these patents in connection with the structures and models in evidence for the same purpose.

We have also divided these exhibits into two classes, viz.; those relied upon by defendants' expert and concerning which the views of the defense have been

stated as to what their bearing is upon Thatcher's invention, and those not referred to by the defendants' expert, and as to which the record is silent as to what their bearing is upon the patented invention. We perhaps might safely have disregarded this latter class. In the words of Mr. Justice Clifford in *Miller* vs. *Smith* (18 O. G., 1048), "Exhibits "introduced by a party without needful explan- "ation do not deserve and will not receive much "consideration." In the treatment of these exhibits by the plaintiff's expert, Mr. Brevoort, this classification is observed, except that in one or two instances exhibits offered in evidence during Mr. Hagan's deposition, but not referred to by him, have been treated under the first class.

NONE OF THE DEFENDANTS' EXHIBITS PRIOR IN DATE TO THATCHER'S INVENTION SHOW WHAT IS DESCRIBED AND CLAIMED IN THE PLAINTIFFS' PATENT.

Exhibits explained by Defendants' Expert.

Mr. Brevoort, having read the deposition of Mr. Hagan, and examined the various exhibits referred to in his deposition, is asked to state whether, in his opinion, any of the exhibits or structures referred to by the witness Hagan do or do not show the invention of Thatcher, as referred to in the first and second claims of his patent No. 104,376. We can do no better than to quote his answer in full (pp. 103–108) :

I will first refer to the various printed exhibits referred to by Hagan and compare what is shown by them with the inventions of Thatcher, and I will lastly compare the structures mentioned by Mr. Hagan with the inventions of Thatcher. The earliest patent referred to by the witness Hagan is Defendant's Exhibit No. 19, being the reissued Letters Patent granted to Nott, Oct. 17th, 1835. This patent contains a large number of drawings showing stoves of various kinds and is to be considered in connection with Defendant's Exhibit 20, which is an enlarged view of one of the sheets of drawings, forming part of the Nott reissue, showing

Figs. 15 to 20. Mr. Hagan says in his deposition as follows, referring to the Nott reissue :

On examining Figure 17 of the drawing, a fireplace stove or heater is illustrated, and at Figure 20 a vertical section of a stove containing a fuel magazine within the stove body, and constructed to be supplied with fuel from an opening in the top of the magazine.

Mr. Hagan also says, referring to the Thatcher Patent and the Nott reissue, as follows :

"If the invention claimed in Exhibit B, and there-
" in described, be considered broad enough to cover
" *elements of stove structure, broadly, and without regard*
" *to specific application*, I do find the elements named in
" the Thatcher Patent to occur in the Nott reissue and
" as shown in figure 20 of the drawings attached to the
" same, in which there is shown a stove body or cylin-
" der containing a magazine or feeder within the cylin-
" der or body, and an opening through which the said
" cylinder can be fed from above."

I cannot find anywhere in the Nott reissue a statement that the things shown at Figures 17 or 20 are to be fireplace heaters in the sense of the Thatcher Patent; that is to say, a heater adapted for simultaneously heating the room in which it stands, and rooms or a room above. Indeed, the Nott patent says nothing whatsoever about heating any apartment other than the one in which the heater is located. Consequently, I think that Mr. Hagan is wrong in classifying that which is shown in the Nott reissue, at Figure 17, as a fireplace heater in the sense of the Thatcher Patent, which latter patent describes a mechanism constructed for heating simultaneously the room in which it stands, and rooms above, being, in fact, a stove in front where it projects into the room, and a furnace behind where it sets within the fireplace. The protuberant front of the Thatcher heater is relied upon to radiate sufficient heat to warm the room in which it stands, while the large furnace-like heating surface of the portion within the fireplace is relied upon to heat the air which is to warm the apartments above. That which is shown in the Nott patent at figs. 17 and 20, so far as can be ascertained, are two stoves, one of which stoves is arranged to be fed from above, through the appropriate opening, the fuel falling upon the grate

below. This magazine, shown in fig. 20, is not arranged as is the magazine in the Thatcher Patent, to supply unburnt fuel to the central part of a fire-pot, larger in diameter than the lower end of the magazine ; but, on the contrary, in the Nott device the magazine and the fire-pot, on three of the sides, are formed by the same wall, the magazine merely being an upward extension of the fire-pot. The products of combustion in the Nott device are not allowed to come in contact with the outer wall of the stove, but pass only backwards over a bridge wall, then downwards and then upwards, on their way to the chimney. Thus the front outer shell or casing of the heater is never directly acted upon by the hot gases, and consequently the room must be heated, I suppose, with such a device, if placed in a fireplace, by allowing the air heated by the rear of the heater to come out into the room, and the direct radiation of heat from the front of the heater is not apparently relied upon for heating the room in which the device stands. This fact is made evident by the drawing of fig. 20, which shows a body of cold air between the fire-pot and that which forms the front of the heater, and fire-brick on each side, thus proving that the said device shown in fig. 20 was not intended to heat rooms above and below simultaneously ; for to do this work successfully, the front of the heater must be hot enough to heat the lower room, while the back part of the heater must be hot enough to heat the air for the upper rooms. It must be borne in mind that fig. 20 is not a cross-section of fig. 17 of of the Nott reissue, and consequently it is impossible to tell precisely how the front of fig. 20 is to be made. Figs. 18 and 19 are cross-sections of fig. 17, and show no magazine or "chamber of preparation," extending to the top of the stove.

Considering now the first claim of the Thatcher patent, I find the first element there referred to is a cylinder or body projecting outward from the mantel or frame. The Nott reissue does not show such a construction—that is to say, it has not got a cylinder or body projecting outwards from the mantel or frame, upon the inside of which the products of combustion impinge, and upon the outside of which the air to be heated strikes, thus making the projecting body or cylinder capable of heating the room in which the device stands. On the contrary, the Nott device has an air space intervening be-

tween its outer casing and the fire, or rather, between the outer casing and the chamber within which the fire is made. Above this double casing it is true that a single plate is used in the machine shown in Fig. 20; but as unconsumed fuel lies within this plate, no heat is practically derived therefrom for heating the room in which the device stands. For the above reasons, I am clearly of the opinion that the Nott device does not possess the first element of the first claim of the Thatcher patent, to wit, a cylinder or body projecting outward from the mantel or frame.

The second element of the first claim of the Thatcher patent is a mantel or frame. In the Nott reissue I do not find shown any mantel or frame for making a tight joint between the heater and the marble mantel, and I do not find it shown or stated in the Nott reissue that the devices there shown are to be set in fireplaces at all. For the above reasons, I am clearly of the opinion that the Nott patent does not show the second element of the first claim of the Thatcher patent.

The third element of the first claim of the Thatcher patent is a fuel magazine or feeder within the cylinder. In the Nott reissue I do not find such a device, but, on the contrary, I find that in Fig. 20 the "chamber of preparation," or receptacle for unburnt coal, is not within a cylinder or body, which is the equivalent of Thatcher's, but that the so-called magazine and firepot are practically one chamber or box, thus precluding the possibility of heating the outermost casing of the device by the direct action of the products of combustion. It is an essential, I think, of any successful fireplace heater, that the magazine, firepot and body should be so arranged in relation one to the other as to allow the products of combustion to impinge against the inner surface of the outer body or case. With the Nott device, or with any device constructed with the walls of the so-called magazine forming on three sides of a square firepot merely a continuation of the said firepot, and with a back draft, it is impossible to heat the outer body; so that, if the device in Fig. 20 was placed within a fireplace, with a closed mantel or frame, sufficient heat would not be radiated from the front alone to heat the room in which the device stood. For these reasons I do not think that the said Nott reissue at Fig. 20 shows the third element of the first claim of the Thatcher patent, to wit, a fuel magazine or feeder within a cylinder or outer body.

The fourth element of the first claim of the Thatcher patent is an opening through which the said magazine can be fed from above. Now, undoubtedly the Nott magazine, such as it was, could be fed from above through an opening; but the magazine is not the magazine of the Thatcher patent, is not a magazine projecting into the products of combustion, and is not, in any sense, the equivalent of the Thatcher magazine. Assuming that the fourth element of the first claim is limited to an opening arranged to conduct the fuel into a magazine which is the equivalent of Thatcher's magazine, I do not think that with such an understanding of the claim the Nott reissue shows the fourth element of the first claim of the Thatcher patent.

The fifth element of the first claim is obviously not shown in the Nott structure.

Referring now to the second claim of the Thatcher patent, I find that the Nott reissue does not show any one of the elements thereof, for the reasons given in relation to the first claim, the difference between the first and second claims is that the first is more restricted than the second, in that it requires that the feed opening of the first claim shall be one through which the magazine can be fed from above; while in the second claim the feed opening might extend to the front or sides of the casing, or heater body projecting into the room.

The patent to Nott, dated September 17, 1832, Defendants' Exhibit No. 22, seems to be the reissue of a patent dated March 23, 1826. I do not find that Mr. Hagan has referred to this patent, and I do not find anything in it, which affects the inventions claimed in the Thatcher patent one way or the other.

The next patent to which I shall refer is marked "Defendant's Exhibit No. 17," and is an English Patent No. 8,065, granted in the year 1839 to Harper & Walker. This patent shows and describes merely a stove to be placed out in an apartment, which stove has in it a magazine for feeding the fire in the firepot below. It is in no sense a fireplace heater having a portion set within a mantel, and a portion extending out into the room, and it is not capable of being so used with any fireplace such as I have ever seen, and it seems to me clear that this exhibit does not show the invention

referred to in either one of the claims of the Thatcher patent. There are many differences between the Harper & Walker outstanding stove and the Thatcher device, but they are so evidently for substantially different things that it will be needless here to refer to the numerous distinctions in detail.

The next patent to which I will refer is the English Letters Patent to Coad & Coad, No. 738, for the year 1852.

This patent, though put in evidence by the defendant during Mr. Hagan's deposition, has not been referred to by Mr. Hagan. This patent does not show anything but a range adapted for cooking and to be set into the chimney breast, as is any ordinary range used in the kitchen of a house. No arrangements are shown for heating a room above, and indeed the Coad & Coad devices are incapable of serving the useful purpose of the Thatcher device, so far as that device is serviceable for heating the lower room continuously, or in other words, the room in which the heater stands. This patent does not show the invention of either the first or second claim of the Thatcher patent, and it is unnecessary to consider in detail all the differences which exist between the structures of Coad & Coad and the Thatcher structure.

I will next refer to the Reissued Letters Patent of B. T. Roney, "Defendant's Exhibit No. 9." This patent shows a base-burning stove and not a fireplace heater, provided with a firepot and a magazine passing from the top of the stove downwards to a point slightly above the top of the firepot. This magazine is fed from the top. The stove of the Roney patent is what is commonly known as an outstanding stove—that is to say, the stove stands upon the floor of the room surrounded entirely by the air of the room, and does not stand within the fireplace. The Roney stove is not intended to heat a room above, and is not so arranged as to be capable of heating the room in which it stands, as well as rooms above; neither is the Roney stove capable of being set in a fireplace in such a way as to warm two or more rooms. It is unnecessary to further compare this Roney structure with the Thatcher device, for the reason that it evidently does not possess the combinations of either the first or the second claim of the Thatcher patent.

The next patent which I shall refer to is the one granted to W. C. Durant, "Defendant's Exhibit No. 13." This patent shows practically the same structure as the Roney patent, with the exception that the products of combustion do not rise upward directly around the magazine, but the air of the room is brought in contact with the outside surface of the magazine, and the products of combustion pass upwards to the chimney through a separate passage-way. The Durant stove is not a fireplace heater, but is an outstanding stove arranged to heat only the room in which it stands. It is not adapted to be placed within an ordinary fireplace, and could not be so placed if desired. This stove, like the Roney structure, is not a stove in front and a furnace behind, as is the Thatcher structure, and which arrangement is essential for a successful fireplace heater. It is unnecessary for me to consider at length the Durant stove as it does not show the combination of either the first or the second claim of the Thatcher patent, both of which claims only refer to fireplace heaters, which are substantially different from any outstanding stove with which I am acqainted.

Mr. Hagan refers to the "Treadwell Patent." There is a Treadwell & Hailes patent, and there is a W. B. Treadwell drawing in evidence, and I do not know which of these exhibits he means. However, I understand the structures described in both exhibits, and neither of them are for anything but an outstanding stove, and neither of them are fireplace heaters, or are devices intended to be set in a fireplace. There are many other differences between the Treadwell and the Treadwell & Hailes devices, and the devices of Thatcher, but it is useless here to go into these differences, for the reason that neither of the patents referred to show the combinations of the first and second claim of the Thatcher patent in suit.

The heater which Mr. Hagan refers to and which is called "The American Heater," is the one I understand having upon it on the top plate the name B. McCann & Co., 273 Fulton avenue, Brooklyn, N. Y. This heater is a fireplace heater having a protuberant front and a furnace-like back, and is arranged to heat the room in which it stands, and also the room above. This heater has no magazine in it, but the fresh coal has to be put upon the fire by hand whenever the fire needs replenishing. This heater is distinguished from the device described in the Thatcher patent in that it has no mag-

azine of any kind. The American heater has an air space between the top of the heater proper and the upper plate, which is exposed to view when the heater is set, through which air space heated air can pass when it is not desired to heat the room above. Mr. Hagan also refers to the heater marked "Budd No. 2," which is the one I understand upon the top plate of which appears the words "Jackson & Son, 246 Front street, New York." This exhibit is a fireplace heater, but like the American heater has no magazine of any kind; and like the American heater, whenever the fire needs replenishing, fresh coal must be put upon it by hand. This heater, also, like the American heater, has an air space between the top of the heater proper and the top plate which is exposed to view, through which the air can be passed to the room when the heater is not warming the rooms above. Neither the Budd nor the American heater shows the invention of Thatcher as expressed in the first or second claim of his patent, for the reason that neither of the said heaters are provided with a magazine within which fresh coal can be placed, and which coal will, as the fire burns, be automatically fed from the magazin · into the fire-pot of the heater, thus insuring a steady fire, and enabling the device to be kept in operation for long periods of time without needing an attendant. This is one of the special features of Thatcher's fireplace heater, that it possesses a magazine for containing unignited fuel held in readiness to be automatically fed upon the fire when necessary, thus insuring the uniform action of the device, both as a stove to heat the room below, and a furnace to heat the room or rooms above. For the above reasons, I am clearly of the opinion that neither the American heater nor the Budd heater show the inventions of Thatcher as expressed in the first and second claims of his patent.

DEFENDANTS' EXHIBITS CLAIMED TO BE PRIOR IN DATE TO THATCHER'S INVENTION, AND NOT REFERRED TO BY DEFENDANTS' EXPERT.

1. *The Morning Glory Stove.*

Jordan L. Mott introduced as an exhibit an outstanding stove, marked "Mott No. 2" (p. 157). This stove disappeared after it was offered in evidence and prior to the hearing in the Court below, and there is

considerable doubt as to its structure (p. 157, and pp. 84, 88–89). It is not shown to have any bearing whatever upon this controversy.

2. *The Nott Saracenic Parlor Grate for dining rooms, &c.*

The evidence of the witnesses concerning this grate is very voluminous. It is confused to such an extent that it is impossible to gather an intelligent idea of what the structure really was.

It is probably for this reason that the defendants' expert failed to refer to it.

Many witnesses, experienced in the trade, including all those who testified to its existence, state that no such thing as this "Saracenic Heater" had been known on the market for a great many years (pp. 78, 165, 236, 254, 266, 288, 294, 297, 298, 301, 304).

While we presume the Court will never look at it, we have deemed it proper, out of abundant caution, to review this evidence, and its bearing upon the case, in an appendix.

Besides these exhibits there are a number of patents not referred to by defendants' expert.

Mr. Brevoort shows affirmatively that none of these exhibits, documentary or otherwise, have any bearing on Thatcher's invention (pp. 108–117, 122–123).

INFRINGEMENT.

As has been before remarked, the answer, while it does not admit, does not deny infringement. As we have already shown, there was nothing in the state of the art which tended to narrow Thatcher's claim to the invention of "*A fireplace stove, or heater, in which the magazine is extended to the feed opening of the outer casing,*" as set forth in his second claim, and the first claim is simply a narrower modification of the second. It is admitted

by the defendant's expert, that, if a broad construction (in accordance with the ordinary and natural meaning of the words) be given to this claim, the defendants' heater infringes. The infringement is obvious on inspection. The infringement is affirmatively proved by both Thatcher and Brevoort (pp. 14–15, 117–119). .

It is proved by Thatcher, and not contradicted, that the fuel in the magazine of defendants' heater is *unignited* (p. 74)

CONCLUSION.

The decree of the Court below should be reversed, and the Court below should be directed to enter a decree declaring that the first and second claims of the Thatcher patent are valid and that the defendants have infringed the same, and directing the usual decree for injunction and account of profits and damages, with costs, in favor of the plaintiffs.

B. F. LEE,
Of Counsel for Appellants.

APPENDIX.

*The Nott Saracenic Parlor Grate for Dining-rooms, &c.**

Andrew Brown is the first witness as to this structure. He produces "Defendants' Exhibit Brown," a tin model, as representing the device in question, and states that it was made by H. Nott & Company previous to the year 1835, and after that down to about 1842 or 1843 (pp. 165–166), and that these heaters "did heat rooms above where they were placed."

In describing the Nott heater, he states that:

"The bottom plate is made of cast-iron, and the side is cast-iron, also the front. These are carried out about one foot ten inches high, or thereabouts, lined with fire-brick on the ends and back, with a division of fire-brick, about two-thirds of the size in width of the chamber of combustion, running down to about four inches above the grate, so as to allow a magazine for coal, with an opening behind this flue brick for the draft."

He states also that the magazine had a damper at its top "to let off the gases and make direct draft" (pp. 172–173).

He states that the side and top pieces of the heater, marked A, B, on the exhibit, were "all full "of small holes in the whole front, to let the heat "out into the room, both top and side pieces" (pp. 170–171), and that the model is not a correct representation of the Nott heater, which was generally known to be a *patented structure* (p. 171). His cross-examination having disposed of Exhibit Brown, (No. 1), he made and produced another tin model Exhibit Brown, No. 2 (p. 175), but on cross-examination he admits that this too is incorrect in most material particulars (pp. 175, 178).

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* See p. 39 of this Brief.

He also produces a circular with wood cuts of the "Saracenic Parlor Grate for Dining Rooms, &c," marked Exhibit Brown, No. 3, but this shows none of the features in question (p. 175).

We ask the particular attention of the Court to the deposition of this witness, when it will be seen, from the whole scope of his examination, that his evidence is not to be relied upon for the purpose of giving a clear and accurate description of this ancient Nott heater. He is certain about nothing (pp. 175, 182).

Charles C. C. Rice is the next witness upon this topic (p. 235). He describes an old fireplace heater which he saw in 1869, (a date in itself too late), at Charles J. Shepard's place of business. The witness gives no very clear account of the heater, its structure or uses, and an attempt failed to have him identify it as being the same as the "Saracenic Parlor Grate for Dining Rooms," &c., shown in the wood cut marked "Defendants' Exhibit Brown, No. 3." In reference to the fuel chamber, Rice says: "I think that reservoir was lined with brick at the time I saw it" (pp. 235-236).

Michael Hassen is the next witness on this subject. He had been porter in the store of Shepard & Co., Nott's successors, since 1851. He characterizes the sketch put in evidence and marked "Exhibit Hassen, for identification," as a poor sketch, and does not seem otherwise to recognize its accuracy (pp. 239–240). This witness makes no statement that the heater in question, which he states he knew at Shepard's establishment as early as 1851, and for years afterwards, was ever used or could be used, to heat rooms above that in which it stood.

Robert Z. Liddle is the next witness. He states that Shepard called his attention to an old fireplace heater in his store, at 242 Water street, New York, about the year 1864 or 1865, "when he had given testi-

mony in the case of Thatcher *vs.* Merklee" (p. 252). It is proved that this suit was not begun until August 22, 1866, and not ended until April 17, 1867 (p. 274).

If the matter has any importance, this last date is too late. There is no certain connection between these dates, and his conversations with Shepard, from whom he derived his information, assuming that such conversations were of any moment.

He says that Shepard stated that it represented heaters which he had sold many years previously (p. 254). He states also that what he saw at Shepard's store was like the "Saracenic Parlor Grate for Dining Rooms, &c.," shown in wood-cut "Exhibit Brown, No. 3," but that it was without the fireplace frame (p. 254); that Shepard gave him "a description of the Nott fireplace heater and a drawing of it in his (Shepard's) own handwriting, as such fireplace heater was commenced to be made by Shepard's firm." This drawing is marked "Exhibit Liddle No. 1" (p. 254). Liddle made the rough sketch, "Exhibit Hassen" (pp. 256–257.) He states that "Defendant's Exhibit Brown, No. 2," resembles what Shepard showed him, except certain differences in form (p. 257). The structure he saw at Shepard's was without the frame and urn of the wood-cut, "Defendant's Exhibit Brown, No. 3," called "Saracenic Parlor Grate for Dining Rooms, &c." (pp. 264–265).

We call particular attention to his answers to cross-questions 106–110 (pp. 265–266) *which show conclusively that the witness had no personal knowledge whatever that the apparatus in question was a fireplace heater, intended to heat rooms above as well as the room in which it was to stand.* The fact that the perforated side and top pieces spoken of by the other witnesses were wanting is a most important fact, as is shown by the plaintiff's evidence in reply (pp. 76–78, 103–106, 115–117.)

The witness had been actively engaged in the stove and furnace business for more than twenty-five years,

and yet that was the only Saracenic grate he had ever seen (p. 226 x-*Q.* 111 112).

He never examined the Saracenic heater more than once (p. 267).

He states (x-*Q.* 191, p. 277) that all the lines indicated in the drawing on "Defendant's Exhibit Liddle, No. 1," were not in the structure that Shepard showed him. He says: "The lines in the drawing which in-"dicate the chimney breast, mantel-shelf and flues for "heated air and smoke, were not in the structure that "Shepard showed me."

Henry O. Andrews is the next witness upon this topic. He went to work for H. Nott & Co., in 1832, in New York, and remained with their successors, including Shepard & Co., until 1876 (p. 277). They sold "Syphonic" heaters and "Saracenic Parlor Grates" or "Nott Fireplace Heaters." The place in which the fuel was fed into the fireplace heater was called "a chamber of preparation" (pp. 278–279).

He says:

"The coal was poured in at the top, and when full and burning it was burnt off at the bottom, it passed up behind a brick—down a flue into a chamber in the rear of the furnace, and then turned and went up two flues to the top, and was connected with a box on the top; on the top of that box was a collar inserted to carry off the smoke and gas" (p. 279).

He stated that he last saw such a fireplace heater about 1875 ("five years ago"), at 242 Water street (*Q.* 28, p. 280), but it afterwards turned out that he referred to an entirely different structure from the one in question (x-*Q.* 97–99, p. 288).

He recognizes "Exhibit Brown No. 3," the wood cut circular, and states that the cut "Saracenic Parlor Grate, for Dining Rooms, &c." does not show the

extended heating surface at the rear of the heater (pp. 281–282). He is then shown "Defendants Exhibit Liddle No. 1," and is asked to state if he finds in it extended heating surface at the rear, and he answers, "I can't say that that represents it" (p. 281). Upon a closer examination he sees "what is meant to represent the heater," and says that "it is a very poor drawing" (p. 282). He states that the model "Defendant's Exhibit Brown No. 3" (No. 2 ?) has one pipe too many in it (p. 282). He cannot state whether Charles J. Shepard had or had not knowledge, during the existence of Nott & Company and Stratton & Seymour, of such Saracenic fireplace heaters (p. 284). He states that *the wings were perforated to let the hot air out into the room in which the heater stood* (p. 285); that the "Syphonic" heater was not sold at as early a period as the "Saracenic" (pp. 284–285).

He is asked whether the Syphonic heaters had a top-feeding mechanism, and answers: "I am not prepared to answer that question, as I have now forgotten" (p. 287). He can give no clear statement of the construction of the "Syphonic heater" (pp. 287–288). *It is more than ten years since he last saw a "Saracenic" heater, but he saw the "Syphonic" heater just before he left* (1876), *and he was constantly in the habit of seeing the "Syphonic" heater up to the time that he left Shepard & Company* (p. 288).

In cross-questions 97 to 99, he states that his testimony in answer to questions 28–33 of his direct examination, in which he stated the particulars of his knowledge of the "Saracenic" heater, and gave the names of the persons in whose houses such heaters were put up, was erroneous, in that the answers should have referred to the "Syphonic," and not to the "Saracenic" (p. 288).

We ask the careful attention of the Court to cross-questions 108 to 113 (pp. 289–290), which show very clearly that the memory of this witness is not to be

relied upon for a clear statement of the construction, either of the "Saracenic," or of the "Syphonic" heater.

He states that the tin model, "Exhibit Brown No. 1," differs very materially from the "Saracenic" heater (p. 290); that the "Saracenic" heater was patented by Dr. Nott (p. 291).

He thinks any one living in New York City could find a sample of the Saracenic heater (p. 291). *The holes in the wings of the frame of the Saracenic heater were always open. Those holes were about three inches in diameter, and about eight inches apart, and there were four in each wing* (pp. 292-293) He states that the Syphonic heater was fed from the front, and not as shown in the tin model, Brown No. 1 (p. 293). He says, that the Saracenic fireplace heaters were most frequently put in, to heat only the room, in which they were set (p. 294).

Michael P. Low was also called to testify concerning this old Nott heater (p. 297). He was a neighbor of the firms of Shepard & Co., Stratton & Co., and H. Nott & Co. He attempts to describe the heater, and says that Charles J. Shepard used to speak of fireplace heaters, and of having sold and put them up; that he saw these heaters between 1840 and 1850 or 1852 (p. 299) in the store, 242 Water street, and *Shepard had said* that he had put up such heaters, to heat the room above, as well as the rooms, in which they stood (pp. 299-300). The last of these conversations was about 1871, long after Thatcher's invention. He fixes definitely no certain date (p. 302).

The frame of the heater had holes in it (p. 302). *He never saw such a heater in use, and the last time he saw one at all was, he thinks, "some time subsequent to* 1840" (p. 304).

He testifies to having been recently shown a drawing or drawings said to represent the heater he testified

about, and that he found these drawings "*very incorrect and imperfect.*" They were shown to him by defendants' counsel before his examination was begun. He was also shown a tin model, said to represent the old heater, which he testified about, and he found it "*very imperfect and incorrect.*" *He informed defendants' counsel, prior to his examination, that he considered said tin model "very imperfect and very incorrect, or words to that effect.*" The model in question was "Defendants' Exhibit Brown No. 2," and the drawings were Defendants' Exhibit Liddle, No. 1 and Exhibit Hassen (p. 305).

Thatcher shows, that a heater constructed like the model "Exhibit Brown No. 2" would not hold coal of a size, that could be practically burned in a stove or heater (p. 76).

None of the witnesses, examined in respect to the old Nott heater, pretend to state, that *the apparatus was adapted, to heat, simultaneously, rooms above, as well as the room, in which it stood, and obviously, the fact that the fireplace screen was perforated with holes, which were permanently open, and that the parts of the heater, exposed in the room, were separated from the fire, by fire-brick at the sides, and cold air to support combustion at the front, would render such action impossible. The most that any witness says is, that the holes were intended to let heat out into the room, in which the heater stood, when hot air was not used to heat rooms above.*

We submit that this evidence falls far short of the strict requirements of law very clearly laid down in

Wood vs. *Cleveland Rolling Mill Co.*, 4 Fisher, 550.

Parham vs. *American Buttonhole Company*, 4 Fisher, 468.

Hawes vs. *Antisdell*, 8 O. G., 685.

Thatcher Heating Company vs. *Carbon Stove Company*, 15 O. G., 1051, 1052.

Miller vs. *Smith*, 18 O. G., 1047.

Admitting, however, all that the witnesses state concerning the old Nott heater, it was not a structure that embodied Thatcher's invention, or that could practically answer its purposes. This is clearly demonstrated by the evidence of plaintiff's witnesses, Thatcher and Brevoort.

Thatcher shows that in case the heater intended to be represented by "Exhibit Brown No. 2," had had fire-brick introduced in its sides and back, as described by the witnesses, and had been set up in a fireplace, with its castellated top and side pieces, perforated as they describe, *the apparatus would have had no capacity to heat the room, in which it was set up, simultaneously with the room or rooms above.* The brick on its sides, and the air space in front of the fire, would thoroughly prevent its heating the lower room. The upper part or box, which holds unignited coal, is not capable of generating any heat (p. 76). If there was an open flue behind the heater in the fireplace, leading to and heating a room on the floor above, the air of the room would pass through the perforated sides and top piece, forming the castellated frame, and the heater could not throw into the room any heat, generated within the fireplace, and behind the perforated castellated top and side frame (pp. 76–77). If, however, there was no open flue behind the heater in the fireplace, leading to another room, the heated air, generated by the heating surfaces, behind the perforated side and top frame, would pass through the perforations, into the room, in which the apparatus was placed (p. 77).

In the wood cut marked "Exhibit Brown No. 3," the apparatus is called the "Saracenic Parlor Grate for "Dining Rooms, &c." This name, taken in connection with the description given, of its perforated sides and top piece, and the fact, that all the surfaces of the heater, in front of the side and top pieces, are prevented by the fire-brick on the sides, the air space in front, and the coal-box, filled with unignated fuel in the upper part, from becoming heated, so as to

heat the room by radiation, would indicate that the heater was intended to be used, only as a dining-room heater, for the room in which it was placed. The apparatus, while not adapted to heat the room in which it is placed by direct radiation, is particularly adapted to heat the room in which it is placed, by heated air, generated by surfaces, behind the perforated side and top frame, the air passing through these openings outward and upward, thus equalizing the temperature of the room. When used as a dining-room heater, the fact that it heated the room, not by direct radiation from its front, but by heated air from its rear, would render it peculiarly useful. "A dining-room is intended "for people to dine in, and for those seated at the "table in front of the heater, it is much better to "have the room uniformly heated by heated air, * * * "than to have a direct radiation of heat from the front "of the heater upon their backs" (p. 77).

The air that fills the air space, extending across the whole front of the heater, in which are the four mica light openings, indicated in the model, is cold air, which passes in through the opening at the bottom, and supplies combustion (p. 78).

Mr. Brevoort's evidence on this subject will be found at pp. 103–106, 115–117, 120.

It is very full and satisfactory. It shows conclusively that "the old Nott structure, if it ever existed, "as testified to, would have deterred, rather than en- "couraged, any one from introducing such a fuel "receptacle, as was there shown, into a fireplace heater, "which was required to heat rooms above and below "simultaneously" (pp. 120–121).

Certainly, no such thing as this "Saracenic Heater" has been known on the market for a great many years.

But when the magazine fireplace heaters, constructed in accordance with the first and second claims of the

plaintiffs' patent, made their appearance upon the market, they were an immediate success, and they have been made by the owners of the patent by the tens of thousands (p. 74.) These facts call to mind the language of Mr. Justice Swayne in the case already cited, *Wood* vs. *Cleveland Rolling Mill Co.*, 4 Fisher, 559, 560, where he says:

In the fossils of geology, belonging to certain classes of animals, regular gradations from a low form of organism to a much higher one are found to exist. The contrast between the highest and the lowest is very striking. The same thing takes place in the progress of inventions. Models and machines in the same series, upon inspection, not unfrequently exhibit curious points of analogy to such fossils. Sometimes one will be found to reach almost the highest point afterward attained, but to fall short of it.

The difference is that between success and failure.

When a great success is achieved in the field of mechanical invention, and the higher organism is protected by a patent, it is almost as certain that invasions will follow, as that there exists the relation of cause and effect. Such is the voice of universal experience.

When the infringer is called to account, one of two defenses is usually set up, and frequently both. First, that the invention, in one of the lower grades, is substantially the same with that of the patentee. The confidence of the attacking witnesses is often in proportion to the distance in time, that one is removed from the other.

Their imagination is wrought upon by the influences to which their minds are subjected, and beguiles their memory.

When the defense is made out, it is the duty of Courts and juries to give it effect. But such testimony should be weighed with care, and the defense allowed to prevail only where the evidence is such as to leave no room for a reasonable doubt upon the subject.

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SUPREME COURT OF THE UNITED STATES,

OCTOBER TERM, 1886.

No. 150.

THE THATCHER HEATING COMPANY, DAVID STUART, RICHARD PETERSON, BENTLEY C. BIBB AND SAMUEL B. SEXTON, APPELLANTS,

vs.

JOHN H. BURTIS AND JOHN M. GRAFF.

BRIEF FOR THE APPELLEES.

A. J. TODD,
Counsel for Defendants,
261 Broadway, New York.

Supreme Court of the United States.

THE THATCHER HEATING CO. ET AL., Appellants and Complainants, vs. JOHN H. BURTIS ET AL., Appellees and Defendants.	Appeal from the Circuit Court for the Southern District of New York. No. 150.

BRIEF FOR THE APPELLEES.

It is contended by complainants that the invention in controversy relates to an improvement in a "Fire-Place Heater." It is, however, neither more nor less than an improvement in a "Stove." The distinction sought to be made is due rather to a classification for convenience of different kinds of "stoves" in the Patent Office. Some are called "Fire-Place Heaters," because of their location in contradistinction to the location, when in use, of the *outstanding* stove. The distinction, however, is not well founded when urged in order to establish a patentable difference between two classes of stoves merely because of the transferring of an element (fuel magazine) from the stoves of the one class into the stoves or heaters of the other class.

The history of the Thatcher application is a most extra-

ordinary one. No less than four specifications respecting the alleged invention were filed between the date the patent was first applied for (March 24, 1868), and the date of its grant (June 14, 1870). (See Rec., pp. 39–64.) The Commissioner of Patents, on one of the rejections, took the proper legal position with respect to, at least, one of the proposed claims, when he said—"and this arrangement of tubes *is common in coal stoves, whether used as fire-place heaters or set out in the middle of the apartment*" (Rec., p. 47, fol. 82). Still, after over two years of gentle manipulation in the Patent Office this patent creeps out with claims to which this same objection equally applies, but which for some unaccountable reason was not raised against them.

I.

The scope of Claims 1 and 2 of the Thatcher patent as contended for by complainants.

Two constructions of these claims of the Thatcher patent are urged upon the Court by the parties to this suit.

The construction presented through the argument of complainants' counsel would make the defendants infringers, but at same time renders such claims invalid because of the subject matter not being patentable—in view of the state of the art.

The construction of claims 1 and 2 hereinafter urged by the defendants, it is submitted, will give the complainants a good and valid patent; but as so construed, the defendants do not infringe.

Mr. Brevoort, complainants' expert, keeps up the Patent Office classification distinction merely, when he adds as a fifth element of the "First" claim, "the *furnace-like back portion* behind the mantel or frame that is essential to a fire-place stove or heater" (*Rec., p. 102, fol. 175*).

He is, however, confronted with the following facts, namely:

FIRST.—That just such a fire-place heater with the "furnace like back portion" existed, *but without the fuel magazine*, prior to the Thatcher invention.

SECOND.—We find that Mr. Thatcher only put into such old "furnace-like back portion" heater a fuel magazine *constructed and* arranged exactly as seen in the outstanding stove.

Mr. Brevoort says at *p.* 122, *fol.* 209, *X* 13: "Such constructions (the magazine in the outstanding stove coming up through the outer casing so as to be fed from the top of the stove substantially as stated in the specification of the Thatcher patent and referred to in the first claim thereof) are shown in patents earlier in date than the invention of Thatcher."

The "American," "McCann," and other like exhibits would be within the meaning of Mr. Brevoort's answer to 11th direct question, wherein he refers to *fire-place heaters without a magazine.* (*Rec.*, *p.* 123, *fol.* 211.)

Mr. Brevoort admits that the object of the top-feed fuel magazine of Defendants' Exhibits Brown, and Van Wormer, McGarvey, and Russell patents, is, "to "enable a supply of unignited coal to be held in readiness "to automatically feed the fire when necessary (Rec., "p. 123, fol. 212, x-Q. 20); that it does not enable the coal "to give out any more heat than would be given out by "the same amount of burning fuel utilized in an apparatus "having the same radiating capacity exactly; but the heat "is more uniform, and the magazine usually being placed "within a cylinder forces the products of combustion as "they rise around the magazine into contact with the "outer wall or body of the device, and this probably tends "to increase the amount of heat radiated (x-Q. 21, p. 123, "fol. 212). *Just these effects are produced when a "magazine is employed in the fire-place stove or heater "instead of within the outstanding stove.*" (x-Q. 22.)

Finally, x-Q. 24, p. 124, fol. 213, Mr. Brevoort concedes the case to the defendants when he says: "Mr. Thatcher's

" invention consisted in the conception that the magazine " of the outstanding stove which was fed through the top " or through a hole in the outer casing direct, could be " beneficially located within the protuberant body of a " fire-place heater. This conception when developed in " practice constituted the Thatcher invention."

Mr. Brevoort also admits that the fuel magazine found in defendant's fire-place heaters is an open work one, substantially the same in construction as that shown in Exhibit Brown Patent (Rec., p. 125, fol. 214), and which is marked as patented thereunder.

The Thatcher invention, consequently, by the testimony of complainants' own expert, consists of the conception that the fuel magazine Thatcher saw in a stove standing out in the middle of the room, could be stuck into the protuberant casing of the stove inserted in the fire-place of the room; and that he reduced the invention to practice when he *changed* the location of the fuel magazine from the one stove to the other. Not an element of the fire-place stove appears to have been altered mechanically in adding to it the fuel magazine of the outstanding stove. If any inventive faculty was exercised in the making of such an alleged invention (change of location), it certainly rests merely in the intellectual conception, that is, in the thought or idea that such a change of location of the fuel magazine would be beneficial.

Can *this* be patentable, even conceding the change was beneficial? It was an obvious change; and one in the making of which did not call forth for more than the ordinary skill of the mechanic. If this change is invention, thousands of simple adaptations made every day of our existence in the workshops all over the country rise to the dignity of patentable changes and should be protected as such.

No new art process or manufacture is involved in this change of location of the fuel magazine from the one stove to the other. This point will, however, be more fully discussed with the aid of adjudicated cases further on.

So much has been said, up to the present, as to the patentability of the subject matter, in order to show to where the absurdity of such a construction as complainants' expert gives claims 1 and 2, leads.

II.

THE SCOPE OF CLAIMS 1 AND 2, AS CONTENDED FOR BY DEFENDANTS.

It is not contended that claims 1 and 2 are invalid when properly construed.

But it is contended that, according to the proper construction of said claims, defendants do not infringe.

In short, we say, the patent is good, but we do not use it.

The patent must be construed in view of whatever is found in the state of the art; also, so as to save it from the objection of the subject matter not being patentable.

The admission of complainants' expert, at the close of the complainants' case in rebuttal, saves us the necessity of examing into the state of the art in order to find, as matter of fact, just what Mr. Thacher did do in the making of this alleged invention.

It is, therefore, unnecessary to consider in detail the evidence respecting the various kinds of outstanding stoves containing a fuel magazine opening into the top of the stove which existed prior to the alleged Thatcher invention. Nor, indeed, does it fairly appear to be disputed, but that fire-place heaters existed having the fuel magazine extended up to and through the top plate of the heater, so that the heater could be fed through such top opening and into the magazine; nor is it denied that the said heaters extended out in front of the mantel of the fire-place, and had radiating pipes at the rear, and that hot air was taken from the rear thereof up to and into the room above that in which the heater was placed.

Here the modified form of fire-place heater of Eliphalet Nott is referred to as made and sold in Water street, in the City of New York, long prior to the date of the alleged invention.

The testimony of Andrew Brown, Henry O. Andrews, Michael P. Low and others, found in the Record, is to effect that these fire-place heaters were modifications of the structure shown in Nott's fire-place heater patent, Defendants' Exhibits 19 and 20, in that the fire-place heater, in the modified form, as put into use not only contained a fuel magazine, but that fuel was fed therein from the top of the heater and in front of the mantel, and hot air was conveyed to the room above, and that both the room above and the one in which the heater was placed were warmed thereby.

Mr. Andrews, who did most of the repairs on these heaters, testifies that they served to heat the room in which they were set as well as the apartment above, *and gave general satisfaction* (Rec., p. 279, fol. 450); that he never heard any complaints that they did not heat both rooms at same time (*id.*) "This represents the heating part of "the furnace; this stands in the chimney—this part of it; "the heat that is made by this part of the furnace is con-"veyed up stairs" (Rec., p. 283, fol. 456). *Andrews* also puts them up (Ques. 20, p. 279).

Michael P. Low, the old stove veteran of Water street, says they would so heat both rooms if they were set right. (Rec., p. 299, fol. 483).

Brown saw them from 1835 to 1843 and they heated both rooms (Rec., p. 165, fol. 284).

Andrew Brown, salesman in Nott's store on Water street, states that *the air got warm in front of the stove as well as at the rear of it* (Rec., p. 182, fol. 306).

Now there is no evidence to the contrary of above statements of these witnesses.

See also R. Z. Liddle, Rec., p. 260, Q. 43; p. 266, x-Q. 107.

He saw Shepard F. P. Heater in 1864 or 5 (Rec., p. 252; Q. 5).

Mr. Brevoort attempts to overcome the force of this proof in a very peculiar and ingenious manner. He says:

" Assuming, however, that the statements of the wit-
" nesses are true, and that with the Nott heater hot pure
" air was sent from the lower room to the upper room,
" and which air was discharged into the upper room from
" a register, even under such supposition the invention
" of Thatcher expressed in the first and second claims of
" of his patent, No. 104,376, would not be shown by any
" of these exhibits for the reasons which I previously gave
" in referring to the Nott patent of 1835, Defendant's Ex-
" hibit 19 " (Rec., p. 117, fol. 200).

Now this is dismissing the matter without in the least attempting to meet it, because the reasons he gives as to the Nott Patent, Defendants' Exhibit 19 (see Rec. p. 104, fol. 178), do not apply to the testimony of these witnesses. The witnesses do not say that the identical structure referred in Defendant's Exhibit 19 was used. They say that a modified structure was used, and by reason of which the hot air was utilized in the room above as well as in the room in which the heater was placed.

Mr. Brevoort thereby virtually concedes all that is claimed for the Nott modified structure as made by the manufacturers on Water street, New York, long prior to any alleged invention of fire-place heater by Mr. Thatcher.

Mr. Brevoort contends that there was no space between the exterior wall of the magazine and the inner wall or cylinder of the stove in this modified form of Nott fire-place heater. There is no dispute as to that; and even so, Thatcher's patent is not for any change he has made in the introduction of the magazine, *per se*, within the cylinder or body of the stove or heater. Mr. Brevoort admits that in this respect (insertion of fuel magazine) Thatcher never made any change, but merely followed the same construction found in the outstanding stove.

Given prior to the Thatcher alleged invention, the modified form of Nott fire-place heater, heating both rooms. Given also prior to the Thatcher alleged invention the way of introducing the fuel magazine found in the outstanding stove, can it then be said that the way of introducing the magazine into such outstanding stove could not be

availed of in the modified form of Nott fire-place heater without being tributary to Thatcher?

Now with all this proof in the case with respect to the state of the art at date of making of the alleged Thatcher invention, let us see what defendant's expert, Mr. Hagen, says respecting the scope of the two claims in controversy.

Mr. Hagen, fifty-five years of age, having resided nearly his whole lifetime in a locality where most of the stoves produced in the United States are manufactured, having for past eighteen years been brought almost daily into contact with inventions for improvements in them, and consulted and employed in a majority of the cases litigated in the United States Courts involving stove patents, says with reference to the patented Nott fire-place heater, that he finds the elements named in the Thatcher patent (if Thatcher is to cover stove elements broadly) in said Nott reissue, fig. 20, in which there is shown a stove body or cylinder containing a fuel magazine or feeder within the cylinder or body, and an opening through which the said magazine can be fed from above. "If the "invention be limited by the patent in application to a "fire-place heater constructed with a concave back, form- "ing a hot air chamber in connection with the heater; a "hot air chamber upon one side of the concave plate, and "the other side of the plate between it and chimney a "free passage for the smoke and gases, I do not find it "there" (Rec., p. 312, fol. 504).

Again, Mr. Hagen says (when asked to compare the defendant's structure with the first two claims of the Thatcher patent and all the patents showing the state of the art):

"If we assume the Thatcher patent, as stated in the "first and second claims, to include elements of stove "structure consisting of a fuel magazine or feeder within "the cylinder and an opening through which the maga- "zine can be fed from above, broadly, and for the ele- "ments themselves rather than for a specific application "of these elements, then they undoubtedly are found in "the defendant's device named in the question. But if the

"claims refer to the specific application of these elements "and their combination with a particular kind of fire- "place heater, they are not there.

"As regards the second claim, the same conditions "which apply to the first as I have named apply to it "also. The Thatcher patent describes but one kind of "fire-place heater or stove wich is peculiarly constructed "with reference to the 'concave stationary back plate *a*,' "and this does not occur in the defendant's furnace, "Exhibit Curtis & Graff Fire-place Heater; nor is the "latter constructed with reference to its rear flue so as "to utilize such a concave plate" (Rec., p. 312, fol. 505).

Thus it will be seen that a construction is here given to the first two claims, which leaves the Thatcher patent valid in face of the state of the art as shown by the patents in evidence as well as free from the prior use of the modified Nott fire-place heater.

III.

WANT OF PATENTABILITY OF THE SUBJECT MATTER IF COMPLAINANTS' CONSTRUCTION OF THE FIRST AND SECOND CLAIMS IS URGED.

We are here brought face to face again with the proposition presented by the complainant, namely: Because Mr. Thatcher thought of taking a fuel magazine out of one form of stove and putting it into another form of stove (called fire-place heater) he made an invention. Very ingeniously, and almost at the close of the case, there is brought into it proof respecting some patented forms of semi-magazine Baltimore heaters *in which the fuel is fed through a door in the side.* It is attempted by such Baltimore evidence to establish that prior to Thatcher's alleged invention, efforts had been made at introducing a fuel magazine into a fire-place heater; and that such had only been partially successful; and to reason therefrom, that invention must have been exercised by Thatcher's

getting into the body of the fire-place heater the top-feed fuel magazine just as it had previously existed in the outstanding stove.

Because some men down in Baltimore were short-sighted, or had retrograded in sticking to a fire-place heater which fed in at the side door, does not prove that Thatcher made an invention by adopting that which existed farther north in the modified Nott fire-place heater and in the outstanding stoves of the period.

Mr. Hagen, with his ripe experience in these stove cases, fitly concludes, after reviewing the state of the art on this question of patentability at p. 313, fols. 506–507:

"In my opinion no inventive capacity of mind was exercised in taking from an older stove a magazine which is fed from the top through an opening, and placing it within the outwardly projecting body or cylinder of the 'Budd' or 'American' heater. My principal reason for this is, that no new result was produced by the combination of the older outwardly projecting body or cylinder and a magazine. The magazine would perform the same function in the Thatcher device that it did in the Roney stove, the Treadwell stove, or the Durant stove; and the outwardly projecting body or cylinder of the 'Budd' and 'American' furnaces, or the 'Thatcher' furnace would perform the same office, whether the magazine was inserted or not; I will not state, however, that any peculiar arrangement of magazine and an outwardly projecting cylinder, if new in the relation to which they were combined, would not constitute an invention; but I cannot conceive that the mere grouping together of these older elements, merely as an aggregation, would call into exercise any inventive faculties of the mind whatever, but in application come within the compass of ordinary mechanical skill; a person seeing a magazine operating in the 'Roney' stove, the 'Treadwell' stove and the 'Durant' stove, and also seeing the projecting body or cylinder of the 'Budd' or 'American' heaters, could apply the one to the other and produce the device shown in the 'Thatcher' patent without

" taxing any of the inventive faculties of the mind what-
" ever."

Mr. Curtis, in the 4th Edition of Curt. on Patents, says: "There is a very material distinction between apply-
" ing a new contrivance to an old object and an old con-
" trivance to a new object. The former may be patent-
" able, but the latter cannot be when the new agent is
" merely one possessing a common analogy." (Sec. 55.)

Here the new agent is the fire-place heater form of stove. Just the same result is accomplished in both cases, namely, a reservoir for the storage of fuel to be gradually supplied to the grate surface. The two structures are clearly analogous; and the introduction of the fuel magazine within the cylinder of the one would suggest its introduction within the cylinder of the other.

Mr. Curtis also remarks (sec. 50, p. 37, 4th ed.): "The
" change or new combination, or relations, must introduce
" or embody some new mode of operation, or accomplish
" some effect not before produced."

Now, the "operation" of the fuel magazine is the same, whether inserted within the cylinder of the outstanding stove, or within the cylinder of the fire-place stove or heater, namely: It contains and gradually supplies the grate surface with fuel; and the effect, a *gradual consumption of fuel*, is the same in either structure.

Mr. Thatcher himself fails to establish any different mode of operation or effect of the fuel magazine within the fire-place cylinder over its mode of operation or effect when placed within the outstanding stove cylinder. (Rec., pp. 94–95.)

He shelters himself behind the fact that he never tried to find out; if any difference exists, he says, " nothing
" but critical examination and practical demonstration
" would enable me to tell." (Rec., p. 95, x-Q. 135.)

Mr. Brevoort, as before stated, testifies that just the

same effects are produced when a magazine is employed in the fire-place stove or heater, as in an outstanding stove. (Rec., p. 123, fol. 212, x-Q. 21, x-Q. 22.)

Mr. Bentley C. Bibb, one of the complainants, is asked and replies as follows: "What difference in the connec- "tion and attachment, that is of substance and not "formal?" A. "There is usually a different arrange- "ment of flues as applied to a fire-place stove that is not "usually found to an outstanding stove, though, I believe, "*such alteration or change does not really produce a* "*difference in the working of the stove or heater.*" (Rec., p. 189, fol. 316, Q. 58.)

David Stuart, another of the complainants, testifies that "the parlor stove and the fire-place stove placed in "the centre of the room as assumed, and being of equal "size both in grate surface and in other ways, both hav- "ing the same radiating surface, *would of course give* "*out the same amount of heat in the room.*" (Rec., p. 214, fol. 350, Q. 72.)

In answer to question 78, p. 215, Mr. Stuart testifies that "the *location* would make no difference if there is equally "as much radiating surface in the one case as in the "other."

He concludes as follows, in answer to question 79: "If "both stoves were of the same size and projected equally "as far in the room and in the chimney, and each had "the same radiating surface in every respect, *they would* "*give out the same amount of heat to the upper apart-* "*ment and to the room as well.*" (Rec., p. 215, fol. 351.)

Mr. Joseph W. Budd, having 18 years' experience as manufacturer of fire-place heaters, testifies (Rec., p. 201, fol. 333): that there would be no practical difficulty in introducing into a fire-place heater a fuel magazine, so that such magazine could be fed from the top, by a person having a knowledge of the previously existing outstanding stoves containing such a magazine.

This is conclusive, that the addition of the fuel magazine to the fire-place heater produced no result over what it accomplished in the outstanding stove.

IV.

THE LAW IS WELL SETTLED THAT THERE IS NO INVENTION IN WHAT MR. THATCHER DID (TAKING INTO CONSIDERATION THE STATE OF THE ART), IF THE CLAIMS OF HIS PATENT ARE TO BE CONSTRUED BROADLY.

Let us examine some of the cases decided in the American and English Courts wherein there is an analogy, so far as the facts are concerned, to the case at bar.

In Brown *v.* Hall, 6 Blatch., 401 (1869), the alleged invention was for an "improvement in paint cans," and the patentee claimed "the employment of a strengthening wire within a bead, and for the purpose herein shown and described," and the specification stated the point of the invention to be, placing a wire within a bead near the top of the edge of the body of the can, close under where the cover, when on, would come to, in order to strengthen the sides of the can, and prevent them from collapsing by the great weight of the paint when the can should be held by the bail. The defendant proved *that substantially the same point of construction had been previously employed in making ice-cream freezers.* Held, that the patent was void; and the plaintiff's bill was dismissed.

In Tucker *v.* Spaulding, 13 Wall., 453 (1871), the plaintiff's patent claimed the forming of recesses or sockets in saws or saw-plates for detachable or removable teeth on circulur lines, and in combination with these recesses, teeth having their base or bottom parts formed on circular lines as described. The defendant offered in evidence, as covering the subject matter of the plaintiff's patent, a prior patent having cutters of the same general form including circular base, as the saw-teeth of the other patent attachable to a circular disk, and removable as in the other, and the claim or purpose of the latter patent was for cutting tongues and grooves, mortices, etc. In connection with this offer, the defendant offered to prove by experts that the process of the two patents was substan-

tially the same. The Court below rejected the evidence. In reversing the judgment for this refusal, the Supreme Court through Mr. Justice Miller, said :

" But if what it (the prior patent) actually did, is in its " nature the same as sawing, *and its structure and action* " *suggested to the mind of an ordinarily skillful mechanic* " *this double use to which it could be adapted without ma-* " *terial change, then such adaption to the new use is* NOT " *a new invention, and is not patentable.*"

In Losh *v.* Hague, 1 Web. Pat. Cas., 202, the alleged invention consisted in a wheel for carriages to be used on railways. It was shown that a similar wheel had been previously used on trucks and other vehicles. *This was held to be merely the application of an old contrivance to an analogous purpose*, and the patent was declared to be void."

In Brunton *v.* Hawkes, 4 B. & Ald., 541, the alleged invention consisted in making the flukes of an anchor in one piece and introducing the shank through a hole in the centre, instead of welding the flukes to thes hank as had been previously done. *It was shown that hammers, pick-axes, mushroom and adz anchors had been previously constructed in the same way.* The patent was held to be void.

In Horton *v.* Mabon, 12 C. B. N. S., 437; S. C., 16 C. B. N. S., 141, the alleged invention consisted in the application of double angle-iron to the formation of hydraulic joints to telescopic gasholders. It was shown that it had been used for reservoirs, cisterns and fermenting vats, but not in the construction of gasholders. The hydraulic joints in teloscopic gasholders had been previously formed by riveting two pieces of angle-iron to a plate which formed the top or bottom of the cup. The use of double angle-iron answered the same purpose *and saved two rows of rivets, and consequently much additional labor.* The alleged invention was held to be nothing more than the *application of a known article to a purpose analogous to*

those to which it had been applied, and the patent was declared void.

The case of Jordan *et al. v.* Moore, 1 L. R. C. P., 624; S. C., 12 Jur. N. S., 766; S. C., 35 L. J. C. P., 268, follows Harwood *v.* Great Northern R'y Co., 2 B. & S., 222, where the Court of Exchequer Chamber reversed the decision of the Court of Queen's Bench. The suit was appealed to the House of Lords, where the judgment of the Exchequer Chamber was affirmed, after the most elaborate discussion, 11 H. L. Cas., 654. The facts in that case presented far weaker grounds of an anticipation than do the proofs in the present suit.

There the alleged invention consisted in constructing fish-plates for connecting the rails of railways with a groove adapted for receiving the heads of bolts or rivets employed for securing such fish-plates. The rails were placed end to end, and the fish-plates were applied to the sides of the joint to prevent a jolt when the wheel passed over it. Fish-plates, without a groove or recess for receiving the heads of bolts, had been previously used for connecting rails. It was also proved that previously, in the construction of bridges, longitudinal beams, the ends of which met and were joined together in the middle of the bridge by a scarf-joint, had been supported by longitudinal bars of grooved iron, placed underneath, and fastened by means of bolts, which passed through the bars and beams from the lower to the upper side of the bridge, the heads of the bolts resting in the grooves. In the alleged invention the plates were placed at the side of the rails, and were intended to resist vertical pressure; in the bridge the bar was placed beneath the beam, and was intended to resist a pressure transverse to the plane of the iron. It was held, however, that the alleged invention consisted merely *in the application of an old contrivance to an analogous use.*

The then Lord Chancellor, Lord Westbury, in delivering his opinion, 11 H. L. Cas., 681, after discussing the evidence, said:

"'Then, my lords, the question is, whether there can be

" any invention of the plaintiff *in having taken that thing* " *which was a fish for a bridge, and having applied it as* " *a fish to a railway.* Upon that, I think, the law is well " and rightly settled, for there would be no end to the " interference with trade and with the liberty of adopting " any mechanical contrivance, if every slight difference in " the application of a well known thing should be held to " constitute ground for a patent. There is the familiar " contrivance of the button to the buttonhole, taken from " the waistcoat or coat, which may be applied in some " particular mechanical combination in which it has not " hitherto been applied; but it would be an idle thing, if " it were possible, to take a well known mechanical con- " trivance, and, by applying it to a subject to which it has " not hitherto been applied, to constitute that application " the subject of a patent to be granted as for a new inven- " tion. No sounder or more wholesome doctrine, I think, " was ever established than that which was established " by the decisions which are referred to in the opinions of " the four learned judges who concur in the second opinion " delivered by your Lordships, namely, THAT YOU CANNOT " HAVE A PATENT FOR A WELL KNOWN MECHANICAL CONTRI- " VANCE MERELY WHEN IT IS APPLIED IN A MANNER OR TO A " PURPOSE WHICH IS NOT QUITE THE SAME, BUT IS ANALO- " GOUS TO THE MANNER OR TO THE PURPOSE TO WHICH IT " HAS BEEN PREVIOUSLY APPLIED.' "

Judge Blatchford, in the case of Myers *v.* Pritchard, said: " The shoe having the substance or material of the " upper part so thickened up, is not a new article of man- " ufacture, in view of the prior shoe having the substance " or material of the sole so thickened up. It is *a mere* " *double use* of the same invention. *The fabric not being* " *new, the application of it to make the upper part of a* " *shoe is not invention, nothing novel being required to* " *adapt it to make such upper part* " (12 *Blatchf.*, 101).

In the case of Gardner *v.* Herz, 16 Blatchf., 303, the invention consisted in combining perforations with several layers of thin veneer for a chair seat. It appeared from the state of the art that chair

seats of several layers of thin veneer without perforations, also thin gutta percha seats, and thin sheet-metal seats having perforations, previously existed to date of the alleged invention. Patent held bad for want of patentable novelty.

Affirmed on Appeal, 118 U. S., 180.

In the case of James Arkell, 15 Blatchf., 439, decided by Judge Shipman, the invention consisted in combining with the serrated edge of a paper bag a thumb opening. It appearing that a straight-edged paper bag with a similar opening was old, the alleged invention was held bad for want of patentable novelty.

In re The application of James Arkell for Letters Patent, Judge Shipman said: "The question resolves itself "into this: 'Plain edged' and 'jaggedly cut' bags being "both well known at the date of this alleged invention, "does a plain edged paper bag, notched at the mouth, "which notch facilitates the opening of the bag, antici- "pate a notched 'jaggedly cut mouth' paper bag, the "notch being for the express purpose of enabling the con- "sumer to overcome the resistance of the felted edges to "the opening of the bag? *The application of an old con "trivance to a new purpose is not patentable when the old "and new purposes and the objects to which the contrivance "is applied, are merely analogous.* If the use of an old "contrivance produces a new effect, the new manufac- "ture or process may be patentable, because the new use "is not analogous to the former one; but if the new "use is simply upon a new occasion, not producing a "new effect, the use is analogous to what had been "done before. (Curtis on Patents, section 56.) In this "case the new use to which the notch was put was to "facilitate the opening of the mouth of a jaggedly cut "bag. The old use was to facilitate the opening of the "mouth of a plain edged bag. *The uses were the same, "and the effect was the same in kind.* The old result of "opening the mouth was attained by the same means "which were used when the former result was attained. "*It is true, that, in jaggedly cut bags the fibres clinch and*

"*felt together, and the object of the notch is to prevent*
"*clinging and felting, but the object of preventing felting*
"*is simply that the mouth may be easily opened.*"

"The notches in either bag is to afford an easy means
"of grasping one lip of the mouth, and thus disengaging
"it from its fellow. The difficulty of opening the mouth
"of a plain edged bag is slight, because either lip is easily
"grasped by the finger, *whereas in a jaggedly cut bag*
"*there is a serious difficulty in inserting the fingers be-*
"*tween the felted fibres of the paper, but the object of hav-*
"*ing a notch and the use of the notch are the same, and*
"*the difference in effect which the notch produces is one*
"*of degree and not of kind.*"

"If the effect of the old contrivance, when applied to
"the new object, is simply a better, and therefore, more
"useful accomplishment of the old effect in an analogous
"object, by the use of precisely the same means, the ap-
"plication of the new use is not patentable.

"*If a person had before him a notched plain edged bag,*
"*it would require no invention to discover that such a*
"*contrivance would also facilitate opening the mouth of a*
"*jagged bag*" (15 *Blatchf.*, 439).

Now in view of the testimony of Mr. Thatcher, which fails to explain any difference in the operation of the fuel magazine as used in these two classes of stoves and heaters (Rec., pp. 94–95, x-Q. 131 to x-Q. 135), it cannot be assumed that there is any difference, except perhaps, degree —just as was decided in the paper bag case above cited.

It is, at most, "*degree*" from the complainants' experts standpoint, as he testified that the fire-place heaters without this fuel magazine would perform the work required by them, but he does not think they would be as *efficient* as a heater provided with a magazine (Rec., p. 123, x-Q. 19).

This "*efficient*," means neither more nor less, in what Thatcher did in view of the state of the art, than *degree*.

It is very clearly stated by Judge Lowell in *Stewart* v.

Mahony, 5 *Fed. Rep.*, 304: "The question of novelty, including in that word the discovery or invention, which will be sufficient to support a patent, is often a very difficult one to decide. Invention often involves a new result, first thought of by the patentee; and in such cases the fact that the mechanical changes he has made are not difficult is often unimportant. *The cases in which invention is wanting are usually those in which the result is old in kind, and the change of means is obvious, or has been used in analogous machines or articles, and then the smallness of the change is very likely to be decisive against the patent.*"

The complainants, the Philadelphia and Baltimore firms of stove manufactures in connection with a Thatcher Heating Co., so called, speculating with this alleged Thatcher patent, are hereby unjustly seeking to make tributary the trade in fire place heaters throughout the North and West.

Mr. Thatcher admits that 999 out of every 1,000 heaters contain this fuel magazine; and that the device was *generally* introduced *very shortly* after the patent was issued (Rec., p. 74, fol. 126).

The fact is, that it was generally introduced *long prior to the issuing of the Thatcher patent;* see testimony of William Burrows, R., p. 147, fol. 259, Q. 5; Jordan L. Mott, R., p. 155, fol. 270, Q. 3, to effect that Jordan L. Mott introduced the magazine feed as early as the latter part of the year 1867.

Mr. Thatcher goes a little back of this date with very indefinite and shaky proof, in order to antedate Mr. Mott's manufacture.

Mr. William C. Lester (R., p. 160, fol. 277, Q. 6) testifies that he introduced this fuel magazine as early as the year 1870, without any knowledge of what Mr. Thatcher had done in the same direction.

See also patent granted to A. K. Saunders, July 14, 1868 (Defts. Exhibit No. 15), showing fuel magazine in a fire-place heater nearly two years before date of Thatcher's patent.

Liddle used it in 1868, and subsequently; R., pp. 255–6–8; Questions 22, 26 and 36.